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US AIR FORCE AIR BASE GROUND DEFENSE DOCTRINE:
ARE THE ISSUES WHICH AROSE CONCERNING AIR
BASE GROUND DEFENSE DURING THE VIETNAM
CONFLICT RECOGNIZED IN CURRENT US
AIR FORCE DOCTRINE?

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE

by

ROBERT A. BARLOW, MAJ, USAF
B.A., University of Maryland, 1973
M.A., University of North Dakota, 1976

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(Block 20, continued) analysis of current US Air Force air base ground defense doctrine in light of the issues which arose during involvement in the Vietnam Conflict were that of the twenty-six issues identified, twenty are recognized in current air base ground defense doctrine and six are not recognized. Thus, historical linkages between past US Air Force air base ground defense experiences and current air base ground defense doctrine are established. Seven recommendations for further study are presented to further explore the implications of the results of this thesis.

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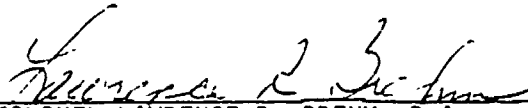
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Name of Candidate: Robert A. Barlow

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Approved By:


_____, Thesis Committee Chairman
LIEUTENANT COLONEL DAVID K. BURKE, M.A.


_____, Member, Graduate Faculty
COLONEL LAWRENCE R. BREHM, B.A.


_____, Member, Consulting Faculty
COLONEL WILLIAM R. LARSON, Ph.D.

Accepted this 27th day of May 1984 by Philip J. Brookes,
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ABSTRACT

US AIR FORCE AIR BASE GROUND DEFENSE DOCTRINE: ARE THE ISSUES WHICH AROSE CONCERNING AIR BASE GROUND DEFENSE DURING THE VIETNAM CONFLICT RECOGNIZED IN CURRENT US AIR FORCE DOCTRINE? By Major Robert A. Barlow, USAF, 179 pages.

This thesis identifies air base ground defense issues which arose during US Air Force involvement in the Vietnam Conflict from November 1964 until January 1973. After identification of these air base ground defense issues, six active duty US Air Force Security Police officers who served in Vietnam during the time period under consideration were contacted to verify the validity of the issues identified in this thesis.

The validated issues were then used to analyze current US Air Force air base ground defense doctrine to identify the degree to which these issues are recognized in the current doctrine.

The results of the analysis of current US Air Force air base ground defense doctrine in light of the issues which arose during involvement in the Vietnam Conflict were that of the twenty six issues identified, twenty are recognized in current air base ground defense doctrine and six are not recognized. Thus, historical linkages between past US Air Force air base ground defense experiences and current air base ground defense doctrine are established. Seven recommendations for further study are presented to further explore the implications of the results of this thesis.

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CHAPTER 1

INTRODUCTION

THESIS PURPOSE

The purpose of this study is to identify the degree to which issues raised by US Air Force air base ground defense (ABGD) operations during the Vietnam Conflict are or are not recognized in current US Air Force ABGD doctrine. This identification of past ABGD issues and their relationship to current doctrine will assist ABGD forces in understanding current ABGD doctrinal taskings. Through such understanding, these forces will be better prepared to both execute their tasks and to continue the process of refining current ABGD doctrine.

Lieutenant Colonel Dennis Drew, writing in the January-February 1982 edition of *Air University Review*, identifies the need within the US Air Force for an "audit trail" linking current doctrine with "lessons learned" from historical experience (1). This linkage ties what has been learned through past experience--or combat--with what current doctrine tasks forces to do in future combat. In other words, the "audit trail" assists modern forces in understanding the basis for current taskings.

Drew notes that current US Air Force doctrine is "... almost exclusively one of current guidance" (2). This observation is applicable to current US Air Force ABGD doctrine, which provides only cursory reference to historical precedents for current ABGD taskings (3). During research for this study, no other research efforts were located which address the historical links between past ABGD experiences and current US Air Force ABGD doctrine.

This focus on US Air Force ABGD doctrine and taskings has been chosen because of the vital role military air forces have played and will continue to play in combat. Without successful ground defense of US military aircraft and their supporting facilities these critical assets may be lost to commanders during future conflicts.

BACKGROUND

In World War I military air forces began to be recognized as useful to the conduct of military operations. Primarily through the efforts of William "Billy" Mitchell the allied air forces in Europe were recognized as a valuable means of reconnaissance. Additionally, as a result of Mitchell's efforts, allied air forces were used to great advantage in an offensive role during the successful allied attack on the St Mihiel salient (4). During World War I,

however, there were no serious ground threats to the major combatants' air force bases (5).

World War II, on the other hand, quickly highlighted the vulnerability of air bases to both air and ground attack. The Germans were highly successful in securing allied air bases on the continent during the early days of the war through a combination of sabotage, aerial bombing, airborne troop deployments and rapid ground advances (6). The Japanese were equally successful in their attacks on air bases in Malaya (7). The allies soon employed similar tactics against the axis powers in North Africa and eventually in both the European and Pacific Theaters of Operation (8).

In response to the serious losses encountered by the major combatants in terms of air forces and air bases, actions to develop effective air base defense were taken by the Germans (9), the British (10), and the Americans (11) during World War II.

After World War II the British retained their air base defense forces (12) while the Americans rapidly disbanded their own air base defense units (13). Between World War II and the outbreak of the Korean War the issue of air base ground defense of US air bases became clouded as the US Air Force became a separate service and the resulting Army/Air Force agreement failed to clearly spell out base defense and area defense responsibilities of the US Air Force and US Army (14).

When the Korean War began, the US Air Force rapidly recognized the need for ground defense of air bases in Korea and quickly built up both ground forces and their armaments to fill this need. Doctrine supporting these actions was published three years later (15). The US Air Force air base defense forces in Korea were not called upon to defend air bases due to lack of enemy targeting of these air bases for attack (16). Repeating the history of World War II, after the Korean War US Air Force air base defense forces were rapidly disbanded and deemphasized (17).

Between the end of the Korean War and the active participation of US Air Forces in Vietnam the air base defense mission received little US Air Force attention. In fact the air base defense doctrine generated during the Korean War was replaced by doctrine emphasizing internal security of air bases (18). This refocusing of US Air Force ground defense doctrine reflected what were then seen as the real threats to air bases (19).

Thus, as US Air Force assets came under hostile ground attack in Vietnam, there was no applicable doctrine governing air base ground defense by US forces. Initially US Air Force Air Police (later redesignated as Security Police) forces attempted to perform their internal security missions on the air bases in Vietnam, relying on sister service and allied ground combat forces for the external area defense of the air bases. As the conflict progressed, however, the availability of sister service external air

base ground defense forces was drastically reduced. Additionally, the effectiveness of allied forces (primarily Vietnamese Army and Air Force units) performing air base ground defense missions proved to be unacceptable. The US Air Force eventually built up significant Security Police forces on air bases in Vietnam to defend against Viet Cong and North Vietnamese Army ground attacks against the air bases. As with the earlier Korean War experience, air base ground defense doctrine was not published until well after the conflict had begun--in this case eight years later (20).

Another parallel between World War II, Korea and Vietnam was the formation of air base defense units. To respond to the need for effective air base defense forces in Vietnam, the US Air Force initiated the concept of the combat security police squadron. This concept called for formation of "... a permanent independent, mobile, countrywide, quick reaction unit" (21). Three such units were formed and trained in the United States and eventually deployed to Vietnam on a rotational basis. These units provided valuable training assistance and actual air base ground defense support to the US Air Force Security Police already in Vietnam (22). However, as with World War II and Korea, as the conflict in Vietnam drew to a close the combat security police squadrons were inactivated (23).

Since the Vietnam Conflict, US Air Force ABGD doctrine has been reviewed and analyzed and was first updated in August 1974 through publication of Air Force Regulation 206-2, Local Defense of US Air Force Bases, which superseded the ABGD doctrine published in June of 1969. Subsequent review of ABGD requirements in light of current technology and threat estimates resulted in publication of Air Force Regulation 206-2, Volume I, Ground Defense of Main Operating Bases, Installations, and Activities, on 22 September 1983. This current US Air Force ABGD doctrine does not cite its historical antecedents.

The need to identify the historical experiences contributing to current US Air Force doctrine has been stated by Drew. This need has also been voiced by Major General I.B. Holley, Jr., (24). Holley identifies as key to the doctrinal development process "The collection or information gathering phase ... tapping the widest possible range of sources ..." (25). Holley goes on to identify the "recorded combat experience" of US forces as the primary source of information necessary to doctrinal development (26). Holley discusses other sources of information necessary to doctrinal development, but the focus of this thesis is Holley's emphasis on "recorded combat experience." Suggestions for expansion of this thesis to Holley's other sources of doctrinal information are provided in the Recommendations for Further Study section

of Chapter 5.

In summary, the US Air Force entered both the Korean War and the Vietnam Conflict without air base ground defense doctrine. The ABGD doctrine which was eventually developed during both of these conflicts was not carried forward after termination of these conflicts. The US Air Force has developed and published ABGD doctrine recently, but this current doctrine only briefly refers to its historical precedents while focusing primarily on current threat estimates and technology.

PROBLEM STATEMENT

To what degree are ABGD issues which arose during US Air Force involvement in the Vietnam Conflict reflected and recognized in current US Air Force ABGD doctrine?

The Background section of this chapter clearly reflects that historical precedents exist relative to US Air Force ABGD doctrine. However, the authors of current ABGD doctrine do not identify these precedents as applicable to current US Air Force ABGD taskings. As Drew states:

"If there is no logic [sic] 'audit trail' from fundamental concepts [as based upon historical experience] to current application, how does one judge the validity of ... doctrine?" (27)

This study does not attempt to validate current US Air Force ABGD doctrine. This thesis will be of value to those who assess ABGD doctrine because it identifies the degree to which the ABGD issues which arose during US Air Force involvement in the Vietnam Conflict are reflected and recognized in current US Air Force ABGD doctrine.

SIGNIFICANCE OF THE PROBLEM

If the answer to the problem statement proves to be that current US Air Force ABGD doctrine does not recognize all of the ABGD issues raised during US Air Force operations in Vietnam, then further study will be recommended to determine if these issues should be considered in current ABGD doctrine. If the answer to the problem statement shows that current ABGD doctrine does in fact recognize past Vietnam experiences, then the "audit trail" identified as necessary to doctrinal development and assessment by Drew will have been provided.

In either case the audit trail between current US Air Force ABGD doctrine and Vietnam's ABGD experiences will have been identified, which will enhance the continuing development of US ABGD doctrine. Such development is vital to the ground defense of US Air Forces and air bases. These assets are essential to the success of US military efforts during future conflicts. Failure to ensure the

development of effective ABGD doctrine could put US Air Forces and their air bases at risk unnecessarily. This possibility is clearly unacceptable, as evidenced by the following comments made by General Charles A. Gabriel, Chief of Staff of the United States Air Force:

"I would support almost any arrangement ... to get better airbase [sic] defense. We'd go to extraordinary measures to get a handle on the airbase [sic] defense problem." (28)

LIMITATIONS

The following limitations result from the limited availability of primary sources of recorded combat experiences applicable to ABGD:

1. This thesis is limited to analysis of US Air Force ABGD operations during the Vietnam Conflict.
- RATIONALE: Holley emphasizes the importance of using recorded accounts of past combat experience (29). Though accounts of air base defense efforts are plentiful, the majority of these accounts address the air aspects of base attack and defense. In fact, a recent research effort into the historical background on air base ground defense identified just two sources of detailed ABGD historical information: Air Base Ground Defense in the Republic of Vietnam, 1961-1973, and The Royal Air Force Regiment, A Short History (30). Due to the significant amount of

well-documented data available in the first of the above references, this study will be limited to analysis of the recorded data concerning the ABGD efforts in Vietnam presented in that reference. The reference reviewed is a presentation of the actual recorded experiences of literally hundreds of US Air Force personnel who were directly involved in air base ground defense during US involvement in the Vietnam Conflict (31). Thus, Holley's emphasis on evaluation of the recorded combat experience of US forces is satisfied.

2. This thesis is limited to analysis of ground defense of air bases. Air defense of air bases is not addressed. RATIONALE: This second limitation is necessary, since there were no hostile air attacks against bases used by the US Air Force in Vietnam.

ASSUMPTIONS

1. The primary assumption in this study is that the presentation of recorded combat experiences by Roger P. Fox, in his book, Air Base Defense in the Republic of Vietnam, 1961-1973, is historically accurate. RATIONALE: This assumption is necessary due to the lack of availability of many of Fox's primary sources during the research effort for this thesis. To give credit where appropriate, the sources of information used by Fox are

identified in the applicable chapter and notes. Additionally, six active duty US Air Force officers who served in Vietnam were contacted and asked to comment on the validity of the author's analysis of Fox's data.

2. An additional assumption made in this study is that history is of significant importance to US Air Force doctrinal development. RATIONALE: This assumption is supported by both Drew and Holley, as previously noted.

METHODOLOGY

The purpose of this study is to identify the degree to which issues raised by US Air Force ABGD operations during the Vietnam Conflict are or are not recognized in current US Air Force ABGD doctrine. In order to accomplish this purpose, the historical data provided in Fox's book was analyzed to identify the issues concerning US Air Force ABGD operations which arose during the Vietnam Conflict. For the purpose of this thesis, the term "issue" is defined as a shortcoming in US Air Force ABGD doctrine during the Vietnam Conflict which led to inadequate defense of the primary operational air bases that were used by the US, as measured by inefficiency in ABGD efforts or by actual losses of aircraft, base materiel resources, or personnel, due to hostile ground actions against these operational bases. This analysis included identification of actions,

if any, taken by the US Air Force to resolve these issues during the conflict and the documented efficacy of such actions. The issues thus identified were then placed into one of the following categories:

1. Responsibilities for ABGD.
2. The Threat.
3. ABGD Missions.
4. ABGD Command and Control.
5. Communications for ABGD.
6. Intelligence for ABGD.

These categories were selected based on the organization of the current US Air Force ABGD doctrine (32). Security Police officers currently on active duty in the US Air Force who served in Vietnam were contacted to verify the validity of Fox's book, and to verify the validity of the analysis of the reported problems. This validation was accomplished because only one source of information was used to identify the US Air Force ABGD issues in Vietnam.

The second step in the methodology was analysis of current US Air Force ABGD doctrine. The analysis of current doctrine involved identification of the current doctrinal taskings for ABGD operations which do or do not recognize the validated ABGD issues identified previously. To facilitate the analysis process, the current US Air Force doctrinal taskings were categorized as were the ABGD issues which arose during the Vietnam Conflict. The result

of this analysis of current ABGD doctrine was a listing of the Vietnam ABGD issues which are recognized by current ABGD doctrine, and a separate listing of Vietnam ABGD issues not recognized in current doctrine.

To illustrate this analysis process, the following example is provided:

1. Analysis of issues raised by US Air Force ABGD operations during the Vietnam Conflict included:

a. ISSUE: Lack of incorporation of allied ground defense forces into the base defense command and control system. RESOLUTION: None.

b. ISSUE: Failure to develop a standardized alerting system for base defense forces. RESOLUTION: Developed security alerting system in 1965; however, system was hampered by uncoordinated implementation procedures.

2. US Air Force Security Police officers who served in Vietnam were then contacted and they validated these issues as representative of the related problems encountered in Vietnam.

3. The above two validated issues were both placed into the category of "ABGD Command and Control."

4. Analysis of current US Air Force ABGD doctrine in terms of the two issues identified above in the category of "ABGD Command and Control" revealed:

a. There is a tasking in current US Air Force ABGD doctrine related to incorporation of allied ground defense forces into the base defense command and control system in accordance with applicable procedures for the theater of operations. A specific end note is cited to refer the reader to the appropriate paragraph(s) in current US Air Force ABGD doctrine which states the applicable tasking. RESULT: The issue is recognized in current doctrine.

b. No tasking in the category of "ABGD Command and Control" addressing a standardized alerting system for base defense forces can be identified in current US Air Force ABGD doctrine. RESULT: The issue and previous resolution actions are not recognized in current doctrine.

Thus, as the illustration demonstrates, the application of this methodology resulted in identification of those issues which were raised concerning ABGD during the Vietnam Conflict which are or are not recognized in doctrinal taskings.

ORGANIZATION

Chapter 1 has presented an introduction to this study and a detailed description of the methodology employed in analyzing the data on which this study is based. Chapter 2 provides a review of the literature from which the data for this study was extracted.

Chapter 3 then analyzes the data concerning ABGD during US involvement in the Vietnam Conflict. This analysis results in a listing of ABGD issues which arose during US Air Force involvement in the Vietnam Conflict. The listing of these issues is by category, with the categories being provided by current US Air Force ABGD doctrine.

Using the ABGD issues identified in Chapter 3, Chapter 4 then provides an analysis of current US Air Force doctrinal taskings to identify the degree to which ABGD issues which arose during US Air Force involvement in Vietnam are or are not recognized in the current doctrine.

Finally, Chapter 5 provides conclusions to this thesis and recommendations for further study.

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13. Fox: 4.
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17. R&D Associates, B-19.
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22. Ibid., 113 (quoting from Pollen, Milton P., End of Your Report (EOIR), 7th Air Force, 7 June 1969, 10-11).
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24. Holley, I.B., Jr., "The Doctrinal Process: Some Suggested Steps," Military Review (April 1979): 2-13; and, An Enduring Challenge: The Problem of Air Force Doctrine (1974).

25. Holley, I.B., Jr., "The Doctrinal Process: Some Suggested Steps," Military Review (April 1979): 5.
26. Ibid.
27. Drew, 48.
28. Schemmer, Benjamin F., "Exclusive AFJ Interview: We Can Count On Our Allies. I'm Not So Sure the Warsaw Pact Can Count On Theirs," Armed Forces Journal International (January 1982): 27.
29. Holley, 5.
30. R&D Associates, B-5.
31. Fox, 254-257.
32. U.S. Air Force, Air Force Regulation 206-2, Volume 1, Ground Defense of Main Operating Bases, Installations, and Activities (22 September 1983): 1-2.

CHAPTER 2

REVIEW OF THE LITERATURE

INTRODUCTION

Short summaries of the content of each source of information reviewed during research for this study are provided in this chapter. Sources which proved to be of significant value to this study are listed first, followed by sources which were of limited or no value. Finally, a short review of classified documents consulted during the research phase of of this thesis is presented.

VALUABLE SOURCES

HISTORY AND DOCTRINE

The need for this study was substantiated by the references consulted concerning military doctrine. Each of the doctrine references emphasized the importance of past experience as a key source of information for doctrinal development. The most valuable sources of information concerning doctrinal development were written by I. B. Holley, Jr., and Dennis M. Drew.

Holley presented a very useful discussion of the shortcomings of US Air Force doctrine in his lecture entitled An Enduring Challenge: The Problem of Air Force Doctrine, which is available in bound form as produced by the US Air Force Academy. Holley's two main points in this lecture are:

"... doctrine is crucially important in the Air Force ... and ... we should be as concerned about the process by which doctrine is derived as we are with doctrine itself." (1)

In a subsequent Military Review article, Holley proposes a process to be used in doctrinal development. The article, "The Doctrinal Process: Some Suggested Steps," emphasizes the importance of recorded combat experiences from past conflicts in development of current doctrine. Holley discusses other sources of doctrine as well, and goes on to describe how the doctrinal development process should proceed.

Equally concerned with the sources of military doctrine, Dennis M. Drew, in his Air University Review article "Of Trees and Leaves: A New View of Doctrine," emphasizes the importance historical experience has on current doctrine. Drew states "... the primary source of military doctrine is military history" (2). He also expresses concern that lack of historical awareness of the foundations for current military doctrine can weaken this current doctrine and its subsequent development process (3). Drew suggests that an "audit trail" is necessary

linking past military experiences with current doctrine to allow for enlightened assessment of current doctrine. This emphasis on the importance of history on doctrine echoes similar assertions by Robert C Ehrhart in his Air University Review article "Some Thoughts on Air Force Doctrine."

Several examples of assessment of current military doctrine in light of historical experience were reviewed during the research process for this thesis. In his Military Review article "AirLand Battle: Doctrine, Not Dogma," William G. Hanne assesses the US Army doctrine of AirLand Battle. Hanne uses examples of Soviet operations against German forces during World War II to clarify the concepts of Soviet echelonment, and to clarify the meaning of the operational level of war. By showing the past flexibility of Soviet operations, Hanne cautions against too rigid an application of doctrinal templating in terms of the Soviet second echelon (4).

Other research sources which apply historical perspective to current doctrine are four research reports written at the Air Command and Staff College. Each of these reports focuses on US Air Force doctrine. Douglas S. Hawkins, in his report Concept for Reasoned Change in the Air Force Doctrine Program devotes a chapter to exploring the historical development of basic US Air Force doctrine, and to showing what effect this historical development has had on current US Air Force basic doctrine.

Hawkins then goes on to propose a framework for future US Air Force doctrinal development.

David P. Handel, in his research report The Evolution of United States Air Force Doctrine, presents

"... a historical review of air power doctrine beginning with the pre-World War I era ... to gain a greater understanding of ... Air Force Basic Doctrine ..." (5)

This report again highlights the need for identifying the historical roots of current doctrine; in this case for the purpose of understanding current doctrine.

John Niebling, in his report Then and Now: Evolution of Air Doctrine, also cites the need for identification of historical precedents for current Air Force doctrine to allow for full understanding of the current doctrine.

In the last of the Air Command and Staff College research reports reviewed for this thesis, Robert E. Blaschke, Jr., in his report The Historical Approach to Developing Doctrine: Does Our Experience in Space Support Current Doctrine?, assesses a part of US Air Force space doctrine. Blaschke's stated purpose is "To determine if Air Force space doctrine is supported by the experience of history" (6). He accomplishes this goal in a limited manner by evaluating one aspect of space doctrine in terms of "... four well-documented military operations ..." in which Air Force space assets played a key role (7).

Thus, research for this study substantiates the need to identify the historical precedents for current military doctrine. Identification of these historical precedents for current doctrine is seen as necessary to both understanding and assessing current doctrine.

SOURCES OF ABGD ISSUES

The single key source document concerning issues which arose during US Air Force operations in Vietnam is Air Base Ground Defense in the Republic of Vietnam, 1961-1973 by Roger P. Fox. This book was written for the Office of Air Force History and provides an in-depth review of US Air Force ABGD difficulties encountered during the Vietnam Conflict; US efforts to overcome these difficulties; statistics concerning hostile attacks against air bases and the results thereof (8); and, a valuable bibliography of other sources of information concerning ABGD in Vietnam (9). In Chapter 3 of this thesis, Fox's book was used as the primary source of data for identification of issues which arose concerning ABGD during US Air Force involvement in the Vietnam Conflict. Where appropriate, the end notes for Chapter 3 reflect the primary sources Fox used for specific points in his work. Most other studies of US Air Force ABGD in Vietnam written since publication of Fox's book draw heavily upon his work, as well.

One such study is entitled Air Base Survivability: Air Base Defense in the Soviet Combine Arms Threat Environment, by Stephen E. Heppell, Robert A. Owen, Jr., and Lars V. Vedvick. This source is in the form of a research report written for the Air War College of the US Air Force. All three authors served as security police officers at air bases in Vietnam. They accept the information provided in Fox's book and identify "... the lessons learned in the Vietnam War ..." as one source of information which caused the US Air Force to eventually write new ABGD doctrine (10). Thus, this source of information provides a means of validating Fox's book. The study goes on to evaluate the updated doctrine represented by the draft Air Force Regulation 206-2 (11) in terms of the current Soviet combined arms threat to air bases in the North Atlantic Treaty Alliance.

Several additional documents which validate the portions of Fox's book concerned with threat forces include the Project CHECO Report: Base Defense In Thailand published in 1973 by Headquarters Pacific Air Forces, and, Counterinsurgency Lessons Learned No. 67: Defense and Vietnam Lessons Learned No. 71: Countermeasures Against Standoff Attacks, both of which were published by the United States Military Assistance Command, Vietnam.

Another valuable source of information for this thesis was written by Henry Reed-Purvis in March 1970, entitled The US Air Force Role and Mission in Air Base Defense. This study, like the Hoppell study, is a research report written for the US Air Force Air War College. The author, a Wing Commander in the British Royal Air Force, wrote the report based on his nearly three years of experience gained while serving as a base defense staff officer at Headquarters US Air Force, under the USAF/RAF exchange program (12). Reed-Purvis' report provides a discussion of US Air Force ABGD efforts since the end of World War II, focusing on base defense in Vietnam and lessons learned there. The study projects future US Air Force base defense force development, and goes on to discuss low level air defense.

The last significant source of information concerning ABGD issues which arose during US Air Force involvement in the Vietnam Conflict was, like Fox's book, written for the Office of Air Force History. Entitled The United States Air force in Southeast Asia, 1961-1973, and published in 1977, Chapter XVI provides a short summary of the topic of air base defense in Vietnam. This summary was of some value in providing a quick overview of air base defense operations in Vietnam.

SOURCES OF CURRENT ABGD DOCTRINE

While the previous references deal in large part with ABGD in Vietnam, this next reference was used as the single source of information on current US Air Force ABGD doctrine and taskings. the reference is US Air Force Regulation 206-2, Volume 1, Ground Defense of Main Operating Bases, Installations, and Activities, dated 22 September 1983. This reference was the basis for Chapter 4 of this thesis, and was also the source of the categories of ABGD issues generated in Chapter 3, and the categories of ABGD taskings generated in Chapter 4.

There are also two other references of note which preceded AFR 206-2, and which show the doctrinal development leading up to publication of the current ABGD doctrine. The first of these other references is Air Base Ground Defense, The Concept for the 1980s, which is an ABGD concept paper published by the Air Force Office of Security Police in 1980. This concept paper analyzes current threat capabilities and develops the ABGD doctrinal needs which eventually became AFR 206-2.

The second reference which preceded the current AFR 206-2 is the draft AFR 206-2, entitled Local Ground Defense of US Air Force Bases, published in December 1982. This draft regulation was based in large part on the concept paper discussed in the previous paragraph, and is the ABGD "doctrine" identified in the Heppell report.

Additional sources of information which were useful to analysis of current US Air Force doctrine in terms of ground threats to air bases included the article "The Soviet Operational Manoeuvre Group, A New Challenge for NATO," (13) by C.N. Donnelly. This article provides detailed information on a significant Soviet threat capability which is targeted against North Atlantic Treaty Organization rear areas.

Another recent article entitled "Air Assault Brigades: New Element in the Soviet Desant Force Structure," (14) by Robert E. Bort, provides an additional perspective on rear area threats which was useful during preparation of this thesis.

A very useful collection of articles and readings relating to low intensity conflict, to include terrorism, are provided by the US Army Command and General Staff College documents listed below:

1. Reference Book 100-39, Low Intensity Conflict, Selected Readings.
2. The P831/A853/PCC course book Readings on Terrorism.

One of the most important documents reviewed for this thesis was the Unified Action Armed Forces (UNAAF), promulgated by Joint Chiefs of Staff (JCS) Publication 2, dated October 1974. This document is the overall doctrinal basis for AFR 206-2, and establishes responsibilities, in very broad terms, for base defense throughout the US

military services.

Finally, the US Air Force document which sets forth basic US Air force doctrine was reviewed. This document, Air Force Manual 1-1, Functions and Basic Doctrine of the United States Air Force, dated 14 February 1979, briefly mentions the need for defense against ground threats. Of interest, however, is the fact that the draft Air Force Manual 1-1, same title, dated 5 January 1984, which updates the 1979 manual, makes no reference to air base ground defense.

SOURCES OF LIMITED OR NO VALUE

In this section, those references which were consulted during the research process supporting this thesis but which provided little or no information applicable to the thesis are listed.

1. A. G. Trevenen James, The Royal Air Force the Past 30 Years.
2. Royal Air Force, Manual of Royal Air Force Regiment Light Armoured Operations and Tactics (Interim Edition).

3. Royal Air Force, History and Roles Lecture--RAF Swinbery and Initial BGs (a lecture).

4. "RAF Regiment Force Improvements," International Defense Review.

5. R. Pengelley, "Airfield Defense--The British Approach," International Defense Review.

6. Bennie L. Davis, "C3I is my highest priority item. Without survivable command and control you cannot execute your forces," Armed Forces Journal International.

7. "Why the 'Ilities' in C3 are 'Survive' and 'Interoperate'," Government Executive.

8. Donald R. Green and John W. Stephenson, "Preparing for the Rear Area Battle," Army Logistician.

9. W. Gordon Welchman, "An Integrated Approach to the Defense of West Germany," Journal of the Royal United Services Institute for Defense Studies. While this article was of little use to this thesis, it does provide an excellent analysis of command, control, communications and Intelligence (C3I) integration of military operations in Europe during World War II. Also addressed in this article are the need for C3I integration in West Germany among North Atlantic Treaty Organization forces, and the need to integrate host nation militia into the overall defense effort.

CLASSIFIED SOURCES

One classified document was of significant value to this thesis. The document, classified SECRET, was generated under Air Force Weapons Laboratory contract number F29601-83-C-0019, by R&D Associates of Marina Del Rey, California. The document, entitled Improving Air Force Capability for Air Base Ground Defense (U), consists of two volumes, and was published in October 1983. While this document provides useful classified threat data, the key utility of the document for this thesis was the discussion of historical information relating to ABGD found in Appendix B of Volume I. Appendix B is unclassified.

No other classified documents contributed information used in this thesis.

SUMMARY

The references listed as being valuable sources of information for this thesis provided sufficient data to conduct this study of ABGD issues which arose during the Vietnam Conflict, and to identify the degree to which these issues are or are not recognized in current US Air Force ABGD doctrine. Additionally, sources found to be of limited or no value to the research effort were listed to aid future researchers in their efforts. Finally, a

discussion of classified research sources was provided, also to aid future research efforts.

END NOTES, CHAPTER 2

1. Holley, I. B., Jr., An Enduring Challenge: The Problem of Air Force Doctrine (1974): 12.
2. Drew, Dennis M., "Of Trees and Leaves: A New View of Doctrine," Air University Review (January-February 1982) 41.
3. Ibid., 38.
4. Hanne, William G., "AirLand Battle: Doctrine, Not Dogma," Military Review (June 1983): 24.
5. Handel, David P., The Evolution of United States Air Force Basic Doctrine (May 1978): 3.
6. Blaschke, Robert E., Jr., The Historical Approach to Developing Doctrine: Does Our Experience in Space Support Current Doctrine? (March 1982): vi.
7. Ibid.
8. See Appendix A to this thesis.
9. Fox, Roger P., Air Base Ground Defense in the Republic of Vietnam 1961-1973 (1979): 254-257.
10. Heppell, Stephen E., Robert A. Owen, Jr., and Lars V. Vedvick, Air Base Survivability: Air Base Defense in the Soviet Combined Arms Threat Environment (February 1983): 20.
11. U.S. Air Force, Revised Draft Air Force Regulation 206-2, Local Ground Defense of US Air Force Bases (December 1982).

12. Reed-Purvis, Henry, The US Air Force Role and Mission in Air Base Defense (March 1970): 65.
13. Donnelly, C.N., "The Soviet Operational Manoeuver Group: A New Challenge for NATO," International Defense Review (August 1983): 1177-1186.
14. Bort, Roger E., "Air Assault Brigades: New Element in Soviet Desant Force Structure," Military Review (October 1983): 21-38.

CHAPTER 3

US AIR FORCE ABGD ISSUES IN VIETNAM

INTRODUCTION

The issues which arose concerning US Air Force ABGD efforts during the Vietnam Conflict are addressed in this chapter. In order to identify these issues, however, a description of what is meant by the term "issue" in this thesis must be provided. Also, the sources used to identify these issues must be identified. Finally, the specific time period encompassing US Air Force ABGD efforts in the Vietnam Conflict must be established. This stage-setting will allow the reader to understand the logical flow of this chapter. To begin with, what is the definition of US Air Force ABGD issues as applied in the context of the Vietnam Conflict? For the purpose of this thesis, "issue" is defined as a shortcoming in US Air Force ABGD doctrine during the Vietnam Conflict which led to inadequate defense of the primary operational air bases that were used by the US, as measured by inefficiency in ABGD efforts or by actual losses of aircraft, base materiel resources, or personnel, due to hostile ground actions against these operational bases. For further explanation,

the term "inefficiency" is defined as the result of ABGD doctrinal shortcomings which detracted from the focusing of ABGD efforts on the combat mission. Also, for the purpose of this study, the primary operational air bases that were used by the US which were specifically evaluated for this study were Da Nang, Phu Cat, Tuy Hoa, Nha Trang, Cam Ranh Bay, Phan Rang, Pleiku, Tan Son Nhut, Bien Hoa, and Binh Thuy (1).

The primary source of information which was analyzed to identify the issues of US Air Force ABGD in Vietnam was the book Air Base Defense in the Republic of Vietnam 1961-1973, written in 1979 by Roger P. Fox for the Office of Air Force History. As the reader will note, most of the end notes for this chapter refer to Fox's book. To provide credit where appropriate, many of these end notes include the source of information used by Fox when writing the book.

Additional information necessary to setting the stage for this chapter involves the time frame in which US Air Force ABGD actions in Vietnam took place. US Air Force assets were first emplaced in Vietnam in 1961, and such assets were subject to attack in Vietnam until January 1973 (2). No overt hostile attacks were made against the ten primary air bases until 1 November 1964. Such attacks continued up until January 29, 1973. Thus, the time frame of interest to this study is ABGD efforts in Vietnam between August 1964 and January 1973.

In this chapter the issues, as defined above, of US Air Force ABGD efforts in the Vietnam Conflict are identified. To facilitate assessment of these issues in Chapter 4 of this study, six categories are used to classify the issues identified. These categories are drawn from current US Air Force ABGD doctrine (3) and their use facilitates the analysis of current ABGD doctrinal taskings in Chapter 4. These categories are as follows:

1. Responsibilities for ABGD
2. The Threat.
3. ABGD Missions.
4. ABGD Command and Control.
5. Communications for ABGD.
6. Intelligence for ABGD.

After identification and categorization of the ABGD issues which arose during US involvement in the Vietnam Conflict, six active-duty US Air Force Security Police officers who served in Vietnam between November 1964 and January 1973 were asked to review and assess, based on their personal experience, the validity of each of the issues identified in this chapter (4). All issues applicable to the time frame each officer served in Vietnam were validated by these officers.

ABGD ISSUES

RESPONSIBILITIES FOR ABGD

The Vietnam Conflict presented the US Air Force with a situation it had never before encountered in defense of air bases--the lack of front lines (5). In Vietnam the enemy was able to move at will throughout the areas immediately surrounding the primary operational air bases used by the US and located throughout the country. This enemy freedom of movement allowed for both small- and large-scale ground attacks against the air bases used by the US. The US Air Force Security Police (SP) assigned to these air bases were initially tasked with guarding cantonment and supply areas while Vietnamese Air Force (VNAF) forces were responsible for internal air base protection, to include protection of aircraft and operational facilities (6). Responsibility for perimeter and external defense of air bases was initially placed solely on the Army of the Republic of Vietnam (ARVN) ground forces (7). From first US Air Force presence in Vietnam in 1961 until 1 November 1964, despite some concern about the viability and reliability of the VNAF and ARVN in terms of their base defense efforts, no significant attacks were conducted against the ten primary air bases used by the US in Vietnam (8).

On 1 November 1964, perhaps in part due to the increase in US Air Force aircraft at bases in Vietnam and the increased use of these aircraft to bomb North Vietnam after the Gulf of Tonkin incident in August 1964, a hostile standoff attack against Bien Hoa Air Base was conducted. The results in terms of losses to the US Air Force and VNAF are summarized in Appendix A. There were no documented losses of enemy personnel, and the enemy used just 70 mortar rounds during the attack (9). This attack and those which followed it substantiated the US concerns about the reliability and viability of the VNAF and ARVN defenses provided air bases. This lack of host nation protection of the air bases and assets thereon was eventually used as justification for the introduction of US ground combat forces into South Vietnam in March 1965 (10).

Thus, US Air Force expectations concerning provision of external air base defense switched from such defense by host nation forces to a combination of such forces and US ground combat forces. As the Vietnam Conflict progressed, however, more US ground combat forces were introduced into Vietnam (initially to provide for base security), and a more active offensive role for these ground combat forces (both Marine and Army) was gradually authorized (11). As this offensive role for US combat forces expanded, the use of such forces for static defense of air bases was almost completely abandoned, and once again the US Air Force was faced with lack of reliable

perimeter and external security against enemy attacks. In fact, on 10 December 1965, the Commander, US Military Assistance Command, Vietnam (COMUSMACV), General Westmoreland, directed all static US forces in Vietnam to undertake their own defense independent of US ground forces, which were to be committed to decisive offensive operations (12). The Joint Chiefs of Staff Publication Number 2 (JCS Pub. 2), Unified Action Armed Forces (UNAAF) published on 23 November 1959, and applicable during the Vietnam Conflict called for assignment of local base defense responsibilities, definition of the areas in which these responsibilities were assigned, and establishment of relations between local and area defense commanders by the unified or specified commanders, as applicable. This publication also specified that base commanders were to exercise operational control over forces of all services engaged in active defense of local bases (13). The lack of specificity in this source of joint doctrine concerning "... the type and limits of the local base defense mission ..." and "... the type and size of the combat forces called for by this function ..." (14) may have contributed to the lack of US Air Force ABGD doctrine during the first eight years of the Vietnam Conflict. This lack of specificity was also reflected in the direction cited above given by General Westmoreland, in his capacity as a subordinate unified commander as defined in JCS Pub. 2. Subsequent to Westmoreland's direction, the US Air Force found the air

bases it occupied defended externally by ARVN, US or allied ground forces; and frequently by no one. At no point did the Air Force accept responsibility for external air base defense (15).

At this point, the first significant issue involving US Air Force ABGD during the Vietnam Conflict may be identified. This issue involved responsibility for external defense of air bases during the Vietnam Conflict. Despite US Air Force requests for dedicated US Army or Marine ground combat forces for air base ground defense, the Joint Chiefs of Staff refused to dedicate such forces to local defense of air bases in the Republic of Vietnam (16). To resolve this issue, the US Air Force Security Police staff embarked on a "crash" program in late 1965 to increase security police forces in Vietnam (17). The only existing security police manning standards were based on "cold war" security operations. No appropriate manning standard was available for security forces operating in the environment represented by Vietnam. This lack of an appropriate manning standard highlighted a second issue-- "... lack of basic US Air Force air base ground defense doctrine for a hostile environment " (18). The relationship between manning standards and doctrine hinges on the fact that manning standards are based on the doctrine applicable to the forces to be used in a given environment. Thus the issue of lack of ABGD doctrine arose. The doctrinal issue was not resolved until 1969

(19), and the manning standards for security police forces in Vietnam were not changed prior to the end of the conflict.

USMACV attempted to reduce the significance of base defense force manning standard difficulties by requesting five US Army air base defense units for the purpose of air base security. This request was forwarded through CINCPAC to JCS, where the request was disapproved (20). JCS directed that air base defense be accomplished through use of all base tenants to defend the air bases, with the security police forces as the experts or cadre upon which this effort would be based. This JCS concept of base defense was at odds with the Air Force concept which held the security police as primarily responsible for air base defense, with temporary augmentation by non-security police personnel (21). Thus, the third issue concerning who within the US Air Force was responsible for ABGD arose, and was never fully resolved during the Vietnam Conflict, though some augmenters were identified and used for air base defense (22).

In terms of Responsibilities for ABGD, another key issue which quickly arose concerned the location and layout of air bases. Existing air bases (Da Nang, Pleiku, Nha Trang, Bien Hoa, Tan Son Nhut, and Binh Thuy) were selected for initial use due to the need to introduce US air power into Vietnam as quickly as possible (23). All of these bases were located in or near population centers, which

complicated the security and base defense missions. These existing bases were used throughout the US involvement in the Vietnam Conflict, and this issue was not resolved.

Four additional air bases (Tuy Hoa, Cam Ranh Bay, Phan Rang and Phu Cat) were built in Vietnam primarily for US use. The construction of these air bases brought to light another significant issue. No US Air Force criteria existed for building air bases in combat areas. Lacking such criteria, the four new air bases were constructed to peacetime standards (24). As a result of using these peacetime standards of construction, such factors as aircraft and resources dispersal and hardening, and air base defense facilities were not considered during construction, and

"... vital resources and facilities were without exception sited at vulnerable locations or so positioned that excessive manpower were [sic] required for their protection ..." (25)

This issue could have been resolved. One security police officer noted that

"... a little forethought in planning could have incorporated dispersal into the general scheme while grouping resources in a tighter-knit layout that would have reduced manpower, increased security, and simplified defense operations." (26)

As attacks against air bases increased, some construction efforts were made to counter the threat to resources and personnel on the air bases. These construction efforts are

discussed in THE THREAT section of this chapter. However, the issue of air base construction criteria was not resolved during the Vietnam Conflict.

THE THREAT

THREAT INTELLIGENCE EFFORTS

In Vietnam the threat was composed of Vietcong (VC) and North Vietnamese Army (NVA) forces. These forces emphasized intelligence gathering as key to successful air base attacks (27). In order to gather intelligence, threat forces used espionage, ground reconnaissance, electronic warfare, and reconnaissance by fire (28). The VC and NVA were expert in all these intelligence gathering methods based upon their long experience against the French during the Indochina War (29).

One of the issues listed under the category of RESPONSIBILITIES FOR ABGD is of importance for discussion in terms of threat intelligence efforts. This issue was that of air base location and layout. As mentioned earlier, six of the primary air bases used by the US in Vietnam were in existence prior to US entry into the conflict. Additionally, the four new air bases constructed were built to peacetime standards. As a result, all of the air bases had significant shortcomings in terms of air base defense.

An example of such shortcomings was that population centers near most of the air bases gave tactical advantage to the VC and NVA, while restricting return of fire by base defense forces into the populated areas. Also, barrier devices such as mine fields, sensors, flares, booby traps, and free-fire zones could not be used where they would endanger the friendly population. These population centers also limited or curtailed the artillery, fixed-wing, and helicopter gunship counterfire operations against VC and NVA forces operating within or moving through these areas (30). To resolve this issue, the US Air Force tried to elicit the support of the local population to deny use of the populated areas to VC and NVA forces. These efforts were uniformly unsuccessful (31).

An additional, related issue at one of the six older air bases involved prior agreements between the VNAF and the local population which allowed for free access by many local civilians onto the air base to visit religious shrines located on the air base (32). Due to the US Air Force's tenant status on these air bases, this issue of free access was not resolved.

Besides the proximity of population centers to air bases, the issue of vegetation control also arose. This issue involved the fact that every base was faced with a significant problem in controlling vegetation growth both on and off base. The vegetation was a significant

"... security threat that varied only in the urgency of its impact [and which] ... greatly favored the VC/NVA either directly by facilitating their military operations or indirectly by restricting activities of allied forces." (33)

Control of vegetation external to the air base perimeters was seen as an allied responsibility, and was never resolved. From the air base perimeter in, however, many attempts were made to resolve the vegetation problem. These efforts included use of defoliants, scraping or clearing by hand, and burning. While some of these efforts were minimally successful, the expense involved and the constraints on use of defoliants prohibited widespread and continued use of such measures. As a result,

"For the United States--as it had for France--vegetation remained a major unresolved problem." (34)

Air bases in Vietnam were also vulnerable to VC and NVA attack due to improper siting of key support facilities. This improper siting of facilities resulted from overcrowding on the six older air bases, and was never fully resolved. Protection for the poorly sited facilities, such as power plants, water supplies, petroleum storage areas, fire and crash vehicles, and support function control facilities (such as those for civil engineers, aircraft maintenance shops, and supply centers) was never accomplished.

The overcrowding of air bases also resulted in inadequate dispersal of aircraft on these air bases. As threat attacks against the air bases began to take a heavy toll in aircraft damaged and destroyed, the issue of aircraft protection was resolved through construction of revetments (which provided line-of-sight protection but no overhead cover) and eventually to construction of aircraft shelters (which provided side, overhead and rear protection for the aircraft) (35).

Threat forces, by virtue of their intelligence gathering efforts, were aware of the vulnerabilities described above on the ten air bases used by the US Air Force in Vietnam.

US VIEW OF THE THREAT

The US Air Force entered the Vietnam War with base security doctrine focused on internal base security against the cold war threat of sabotage actions against critical resources on the base. This internal security doctrine emphasized controls over circulation of personnel around and within critical resources such as command posts, flight lines and fuel and ammunition storage areas. This doctrine assumed an environment on and around air bases which did not include presence of hostile, well-armed enemy forces willing to overtly attack the air bases. This assumption proved to be invalid during the time period in which US Air Forces were stationed in Vietnam.

Initially, defense against any hostile acts against air bases was to be the responsibility of the VNAF and ARVN. As the hostile ground threats proved increasingly viable against the air bases, the VNAF and ARVN defenses proved inadequate. Also, as the US ground forces which first deployed to Vietnam for base defense took on a primarily offensive role, the defense of air bases fell to the US Air Force security police, who were never charged with external defense of air bases. During the period from 1964 through 1973 the threat to air bases continued, as reflected in the air base attack statistics provided at Appendix A.

TYPES OF THREAT ATTACK

Fox identifies four categories of "counter-air base operations" employed by threat forces in Vietnam: "...standoff attacks, sapper raids, battalion-size assaults, and sabotage" (36). R. Pengelley, in his article "Airfield Defense--The British Approach," notes:

"As targets, airfields have much to recommend them--they are static, difficult to conceal and much data about their precise layout can readily be obtained ..." (37)

The ten primary air bases used by the US in Vietnam were no exception to this observation. The VC and NVA took advantage of air base vulnerabilities to gather detailed intelligence concerning the air bases.

-STANDOFF ATTACKS-

Based upon the statistics in Appendix A, the effectiveness of the threat against the ten primary air bases used by the US Air Force can be summarized as follows. At a cost of 430 personnel and 6,163 rounds of rocket, mortar or recoilless rifle ammunition, the VC and NVA:

1. Killed 309 US/RVN personnel.
2. Wounded 2,206 US/RVN personnel.
3. Disrupted air base operations 475 times.
4. Destroyed 100 aircraft.
5. Damaged 1,203 aircraft.
6. Destroyed in excess of \$11,042,000 worth of munitions.
7. Destroyed 460,000 gallons of aviation fuel.
8. Destroyed fuel storage tanks with a storage capacity of 2,250,000 gallons.

It should be noted that:

"... no detailed records are available of the supplies, facilities and other military resources destroyed or damaged." (38)

The standoff attack was "... the most common, simple, economical, and effective"(39). In fact, of the 475 attacks by the VC and NVA against air bases, 94 percent were standoff attacks. Thus, the single greatest threat to air bases in Vietnam proved to be the standoff attack.

Closer analysis of the statistics concerning these attacks show that 72 percent of the attacks were confirmed to have occurred between the hours of 1900 and 0600. Of the total damage done by standoff attacks, the following figures show what percentages of the total damage done resulted from standoff attacks between the hours of 1900 and 0600:

1. 77 percent of total US/RVN aircraft destroyed.
2. 78 percent of total US/RVN aircraft damaged.
3. 68 percent of total US/RVN personnel killed.
4. 69 percent of total US/RVN personnel wounded.

Of particular interest is that the above damage cost the VC and NVA only two percent of their total personnel killed in action during attacks against air bases, and only nine percent of their total personnel taken as prisoners of war during attacks against air bases (40). These minimal losses to the VC and NVA forces reflect their procedure of initiating standoff attacks at a distance from the air bases beyond the effective fire range of on-base air base defense force weapons (41).

To resolve the issue of how best to defend air bases against standoff attacks, the Seventh Air Force Commander directed initiation of a rocket watch around the Tan Son Nhut and Bien Hoa Air Bases (42). Instituted on 24 February 1968, the rocket watch program was noted as "... the most telling countermeasure against standoff

attacks ..." (43). The rocket watch linked US Air force air power with US Army aviation, artillery and infantry forces. This combination of efforts against standoff attack, while not totally stopping standoff attacks, resulted in the fact that "... rocket attacks ceased to be a real threat"(44). This observation is substantiated by the statistics listed in Appendix A.

In addition to the rocket watch at Tan Son Nhut and Bien Hoa, the US Marines at Da Nang took action to address the issue of detecting and counterattacking against standoff attacks. On 4 December 1964, the Marines installed countermortar radar at Da Nang. In that same month COMUSMACV requested countermortar radars for use at other air bases in Vietnam. Eventually these radars were emplaced at Bien Hoa, Nha Trang, Pleiku, and Tan Son Nhut (45). These radars were noted as being effective in identifying the location of standoff attackers using mortars, and in allowing for rapid counterfire (46). Thus, use of the rocket watch and countermortar radars at some of the air bases resolved to a large degree the issue of standoff attacks against air bases.

-SAPPER RAIDS-

The second most common form of VC and NVA attack against air bases was through use of sappers to covertly penetrate base perimeter defenses and destroy or damage aircraft, fuel and ammunition stores, and facilities. Only sixteen sapper raids were recorded during the period from 1964 through 1973. The issue confronting air base defense forces involved how best to detect and neutralize sappers prior to the time they could reach their objectives.

In terms of detection efforts, the US Air Force tested ground surveillance radars, which were found to be inadequate (47). Other detection devices employed included night vision devices, high-powered binoculars (most effective at bases where adjacent well-lit populated areas made night vision devices unusable), trip flares, mines, and concertina wire. All of these devices were of use in detecting or delaying sapper raids. Detection of sappers was most successfully accomplished, however, through use of sentry dog teams patrolling base perimeter areas (48). Difficulties encountered with the feeding, care, training and housing of the sentry dogs were solved during the conflict. These dogs were also useful in detecting the third mode of attack employed by the VC and NVA.

-BATTALION-SIZE ATTACKS-

This third form of attack involved multi-battalion direct assaults on the air bases. Such attacks occurred just twice during the Vietnam Conflict. These attacks were directed against Bien Hoa and Tan Son Nhut Air Bases on 31 January 1968, during the Tet Offensive. The issue of how best to defend against such large-scale attacks against air bases was resolved through early warning of the attacks provided through intelligence channels, and through mobility and firepower of the defending forces. The goal of this type of attack was to over run and hold the air bases. The VC and NVA failed to accomplish this goal.

The reported results of the two attacks were 27 US personnel killed, 112 wounded, destruction of 2 aircraft, and damage to 30 aircraft. Information concerning VC and NVA losses is limited to losses within the base perimeters, which included 296 VC and NVA killed and 34 taken prisoner of war.

Despite the successful defense of Bien Hoa and Tan Son Nhut against the large-scale attacks, the Seventh Air Force Commander foresaw the need to have some type of back-up, quick reaction air base defense forces to counter future battalion-size attacks. He requested deployment of a Combat Security Police Squadron (CSPS) to Vietnam to fulfill this need.

One CSPS had been formed and tested in Vietnam in the first seven months of 1967. This unit was returned to the US after the test and disbanded due to lack of perceived need. After the request for CSPS deployment following the Tet Offensive, the US Air Force response was rapid (49). Members of the test CSPS unit were used to train the first operational CSPS at Army facilities made available at Schofield Barracks, Hawaii. The training began in March 1968 and the first 559-man CSPS deployed to Vietnam thirty days later.

Due to the manpower ceilings in Vietnam, this first CSPS, and the two subsequent CSPSs formed were deployed to Vietnam on a temporary duty (TDY) basis. From April 1968 until the CSPS program was discontinued in December 1969, the rotation of CSPS units on a TDY basis to Vietnam continued, with one CSPS in-country at any given time.

Due to the rapid implementation of this program, several difficulties arose concerning the CSPS roles and missions. For example, while the training provided the CSPS by the members of the test CSPS unit did emphasize needed individual and crew-served weapons training, this training also focused to a large degree on US Army Ranger training, which was the training given the test CSPS unit. Much of this Ranger training dealing with operations behind enemy lines was not applicable to the needs of static air base defense operations for which the CSPS units were to be employed.

Additionally, the CSPSs were trained and deployed as tactical units, as opposed to the individual assignment of security policemen to units in Vietnam. Once a CSPS arrived in Vietnam, however, it was frequently divided into sections or sometimes into individual members to fill the needs of the security police units at the various air bases. This fragmenting of the unit integrity of the CSPSs had a significant negative impact on the CSPS unit morale and tactical capabilities.

In all, however, the CSPS concept was seen as the correct approach to air base defense as practiced in Vietnam (50). The key difficulty was th

"... incompatibility of organizational structures [between] ... the tactical organization of CSP elements ... [and] the non-tactical organization of Security Police units." (51)

-SABOTAGE-

The final form of attack used by the VC and NVA against air bases in Vietnam was sabotage. The opportunities for sabotage of resources on the air bases were frequently available (52) due to the poor layout and location of air bases and the difficulties with air base access controls. The fact that sabotage was used only once in Vietnam against the air bases remains unexplained. However, this form of attack was the one threat that US Air Force security police forces had been trained to counter prior to and during their deployment to Vietnam.

ABGD MISSIONS

Given that the US Air Force considered external defense of air bases in Vietnam someone else's responsibility, the mission of US Air Force security police forces deployed to Vietnam was initially seen as one of protecting cantonment and supply areas. During the course of the conflict the security police took a much more active part in this internal security role. This change in mission was not reflected in US Air Force doctrine until publication of Air Force Manual 206-1, Legal Ground Defense of US Air Force Bases, on 30 June 1969. This allows identification of another issue encountered in US Air Force ABGD operations in Vietnam--failure to anticipate probable missions for security police forces defending air bases.

Without identification of the missions likely to be performed by US Air Force security policemen in an ABGD setting, the training and equipping of these forces tended to be inadequate for the mission of air base defense against insurgent attacks. As Fox notes:

"The USAF reaction ... was to ship the basic means of air base defense to South Vietnam--man by man and item by item. Then in the combat zone the Air Force assembled, organized, and trained these troops. More than 8 months passed before this process began to turn out forces that showed elementary skill in executing their unit mission." (53)

From this discussion arise several additional issues encountered during US Air Force ABGD efforts in Vietnam. First, there was a lack of training for security police forces in terms of the mission to be performed prior to deployment of such forces to the combat zone. Secondly, the equipping of these forces for the mission to be performed was not accomplished prior to their arrival in the combat zone.

TRAINING

Between 1956 and 1965 no continental United States (CONUS) training of US Air Force security police forces included topics relevant to air base ground defense (54). In 1965 a five-day Combat Preparedness Course for security police was begun at Lackland Air Force Base, Texas. This course was extended to nine days in 1968, and was further extended and developed in 1970 (55). However, the training was found to be insufficient for the base defense forces' needs in Vietnam (56). Specific difficulties with the CONUS training included inadequate space for tactical training, lack of funding and insufficient priorities for such training (which severely limited training weapons, ammunition and vehicles) (57).

To resolve this training issue, from late 1965 until 1967 each air base in Vietnam instituted its own air base defense training program. These programs also proved to be inadequate and lacked standardization. In 1967 the in-country air base defense training program was formalized and expanded, with more positive results (58).

Due to annual rotation of all security police personnel back to CONUS, an additional training issue arose. There were insufficient fully-qualified enlisted security police personnel in the US Air Force to provide a continuous flow of such qualified enlisted personnel to security police units in Vietnam (59). As a result, unqualified enlisted security policemen were sent to Vietnam to perform as air base ground defenders. To resolve the issue of qualification of these enlisted personnel, the US Air Force implemented a program whereby unqualified enlisted security police personnel sent to Vietnam were entered into a formal on-the-job training (OJT) program, requiring off-duty study and extensive record keeping. Unfortunately, the working environment, lack of study areas, and lack of relevance of OJT materials (which were geared strictly to peacetime security operations) all combined to negate the usefulness of this OJT program. The issue of training unqualified security policemen assigned to air bases in Vietnam was not resolved.

LOGISTICS

Additional issues encountered by the security police in Vietnam due to lack of clear delineation of the ABGD mission can be tied to the general area of logistics support of the ABGD mission. Without US Air Force ABGD doctrine, such support was difficult to justify, and in fact the logistic support agencies were unprepared for the demands placed on them by the security police (60).

To begin with, the facilities the US Air Force inherited from the VNAF were in very poor repair. Fencelines were incomplete and frequently overgrown with dense vegetation. Minefields were poorly charted, if at all. Perimeter lighting was nonexistent or inadequate at most bases. Security facilities such as fighting positions, bunkers and control centers were either nonexistent or falling apart. Because of the lack of Air Force doctrine to support construction of such facilities, and the concomitant lack of preparedness of the civil engineering function to do so, the security police turned to self-help efforts. The term "self-help" refers to use of security police personnel to construct, repair and improve the facilities necessary to the ABGD effort. In the later years of the conflict, some civil engineering support was provided to the ABGD effort, usually after a hostile attack against a base pointed out specific facility shortfalls requiring emergency action. However, the security police self-help efforts continued up until the

end of the conflict, and proved to be a significant and costly drain on the manpower resources deployed to perform the combat mission of ABGD (61).

Other support which fell short in terms of ABGD needs involved the weaponry provided security police performing the ABGD mission. Security police first deployed to Vietnam with .38-caliber revolvers and .30-caliber carbines (62). These weapons were ill-suited to this region of the world and led to frequent maintenance problems. As the Air Force took a more active part in the internal ABGD mission, however, the need for weapons more suited to the requirements of ABGD in an insurgent environment was recognized. The Air Force authorized individual and squad automatic weapons, grenade launchers, mortars, antitank rockets, handgrenades and illumination flares for security police use (63). Not until mid-1969 were the requirements for these weapons substantially met.

An equally important issue which quickly arose involved the maintenance and repair of these weapons. Since the weapons were not listed within the necessary Air Force logistic system documents, spare parts were almost impossible to procure. Additionally, no Air Force personnel were trained in maintenance of these weapons. These shortfalls in weapons spare parts and maintenance were not resolved as of the end of the Vietnam Conflict (64).

In addition to logistics issues which arose with regard to ABGD weapons, nearly identical issues arose in the provision of vehicles for the ABGD mission. The transportation system the Air Force brought to Vietnam was designed to provide and maintain vehicles for use in a non-hostile environment where trained mechanics could monitor vehicle usage and make repairs on a scheduled basis. The vehicles available to the security police were ill-suited to operations in the hostile environment of Vietnam, and the transportation supply and maintenance systems could not cope with the high rates of repair required to maintain the ABGD vehicle fleets.

As with the weapons needs, the Air Force recognized the need for more and better-suited vehicles for ABGD forces in Vietnam, and authorized procurement of these vehicles. Also, as in the case of the weapons, sufficient supplies of these better vehicles were not available and were very slow in arriving for ABGD use. Once such vehicles arrived in country, repair parts and trained personnel to maintain and repair these vehicles were very difficult to come by. To resolve the issue of vehicle repair and maintenance the security police once again turned to self-help in an effort to keep as many vehicles running as possible. These self-help efforts placed an additional drain on the manpower resources whose primary combat mission was ABGD (65).

ABGD COMMAND AND CONTROL

The command and control of ABGD efforts during the Vietnam Conflict were hampered by several factors. First of all, the issue of combined command arose. Normally, host nation and US forces would have been integrated into a single command structure, allowing for clear lines of command and control from the senior commander to the unit level. In Vietnam this issue was unresolved due to the fact that no combined command structure was formed. This lack of combined command resulted from political considerations in which the Vietnamese wished to avoid the appearance that ARVN and VNAF forces were puppets of the US. The only partial resolution of this issue was achieved by various individual commanders at the air base level who, through force of personality, were able to achieve some degree of support and cooperation from their VNAF and ARVN counterparts.

Additional efforts to overcome this lack of a combined command structure included creation of Joint Defense Operations Centers or Installation Coordinating Centers at the air bases. These centers were little more than a forum for trying, usually unsuccessfully, to work out the various ABGD issues which arose (66). Joint Defense Plans were also written by the US ABGD planners at the air bases. The few plans which achieved any degree of success did so only as a result once again of the force of

personality of the US official who coordinated these plans with the VNAF and ARVN commanders also responsible for the bases.

COMUSMACV perceived the need to provide some commonality to the defense efforts of the US and host nation forces at the air bases in Vietnam. The vehicle used to achieve standardization was the security alert condition (SACON) system instituted in 1966. This system dictated specific levels of ABGD readiness based on the threat faced by the air bases at any given time. Each base implemented the SACON system. If the threat were considered normal at a given base, the SACON would call for manning of the normal ABGD posts.

"Ideally, any change in the SACON of a base triggered a standard, predetermined, and coordinated shift in the strength and disposition of defense forces." (67)

Unfortunately, the lack of a combined command structure meant that a change in SACON could be declared by either the Vietnamese commanders or the US commanders. Sometimes the US ABGD forces found themselves in one SACON while the Vietnamese forces were in a different SACON. Despite these difficulties, however, the SACON was noted as having been of some use in resolving the issue of combined command.

Another command and control issue which arose during the Vietnam Conflict involved how best to integrate the efforts of the US Air Force, US Army and US Marines in terms of support for ABGD. The Army provided varying degrees of interface with US Air Force ABGD forces, ranging from advisors to full ground combat support in the Saigon-Tan Son Nhut-Bien Hoa area on several occasions.

The Marines achieved the best integration of ABGD efforts at Da Nang. This integration issue at Da Nang was resolved primarily due to the fact that the Marine Amphibious Force Commander whose headquarters was located at Da Nang assumed full responsibility for ABGD and acted as the single commander for all Marine and Air Force ABGD efforts. As a result, Da Nang was the first air base to have countermortar radar, complete fencing, functional perimeter lighting, an intrusion detection system, and integrated command and control over all ABGD forces. The statistics concerning attacks against Da Nang reveal the effectiveness of this integration of command, in that there were significantly less attacks on Da Nang than there were on the other bases.

Integration of Vietnamese and US ABGD forces was predominantly unsuccessful. This was primarily due to the VNAF and ARVN command structures which stifled officer initiative and motivation. Additionally, there was a great deal of enmity between the VNAF and ARVN which complicated US dealings requiring cooperation of both

forces (68). The issue of integrating Vietnamese and US ABGD forces was unresolved throughout the conflict.

COMMUNICATIONS FOR ABGD

The communications systems provided US Air Force ABGD forces in Vietnam mirrored the issues identified concerning vehicles and weapons. This raised the issue of the need for tactical radios for support of ABGD operations. The security police were provided with leased, two-channel radios designed for peacetime use on air bases in CONUS. In Vietnam these radios were found to lack necessary durability, provided insufficient channels for all users (especially during periods of hostile attack against the air bases), and did not provide for communications with other US or allied services operating around or near the air bases. Additionally, these radios were not protected against jamming. To resolve this issue, backup land line communications systems requiring wire and telephone or telegraph instruments were requested, but were unavailable throughout most of the conflict.

Radios more suited to ABGD needs were requested by Seventh Air Force in 1967 (69) but the Air Force was unable to design, test and procure such radios for ABGD use during the conflict. Some US Army AN/PRC-25 tactical radios were requisitioned, but very few were available to ABGD forces throughout the period of the conflict (70).

INTELLIGENCE FOR ABGD

Yet another key area in which US Air Force supporting agencies were unable to meet ABGD needs in Vietnam was that of intelligence. The issue which arose involved timely intelligence support needed by ABGD forces, and identification of the source for such support. Factors similar to those encountered with weapon and vehicle procurement also plagued the intelligence support arena. Specifically, the Air Force intelligence system was manned for and oriented on support of air operations against North Vietnam and support of US Army and marine offensive ground combat missions. There were sufficient Air Force assets to adequately support this mission, but none were available for support of ABGD. On two occasions, when insurgent actions against air bases proved too troublesome, air reconnaissance assets and trained photo analysts were employed to identify enemy locations around air bases, and subsequent ground actions were highly effective against enemy forces at those locations (71). Unfortunately, a request for additional photo interpreters to support the ABGD effort was denied (72).

To resolve the issue of lack of full-time support for ABGD operations from the Air Force intelligence activity, the Air Force Office of Special Investigations (AFOSI) established, on a self-help basis, a ground intelligence collection system. The security police

matched this effort through dedication of some ABGD personnel out of existing manpower authorizations to act as the focal points for all intelligence relating to ABGD. Eventually some security police authorizations were approved for these intelligence focal point positions. To round out these resolution efforts, Seventh Air Force Security Police created a Base Defense Operations Center which operated on a 24-hour basis and which monitored intelligence applicable to ABGD which was available to Seventh Air Force. A weekly intelligence summary was then compiled by this Seventh Air Force operations center and disseminated to all air bases for use in ABGD planning (73).

VALIDATION

A total of twenty six issues which arose during US Air Force ABGD operations in Vietnam have been identified through analysis of the information provided in Fox's book. These issues have been categorized in the narrative portion of this chapter. In order to validate these issues as representative of the situations encountered by US Air Force security police ABGD forces in Vietnam, six US Air Force security police officers currently on active duty who served in Vietnam were contacted. Each of these officers was informed of each of the twenty six issues identified

and was then asked to comment on whether these separate issues were valid, based on each officer's first-hand experience in Vietnam. Due to the fact that each of the officers contacted served in Vietnam at different times or at different bases, several of the officers did not encounter some of the issues identified. However, each of the issues was validated by at least four of the officers contacted. These officer's names and duty locations are provided at Appendix B.

SUMMARY

To facilitate the analysis of current ABGD doctrine in Chapter 4, the twenty six ABGD issues which arose during US Air Force involvement in the Vietnam Conflict are summarized by category below:

RESPONSIBILITIES FOR ABGD

1. ISSUE: Which US military service was responsible for external ground defense of air bases during the Vietnam Conflict?

RESOLUTION: None.

2. ISSUE: There was no US Air Force ABGD doctrine available for the first nine years of US Air Force Involvement in the Vietnam Conflict.

RESOLUTION: The US Air Force published AFM 206-1, Local Ground Defense of US Air Force Bases, on 30 June 1969.

3. ISSUE: Which agency within the US Air Force was responsible for ABGD?

RESOLUTION: Not fully resolved, though the US Air Force identified the security police as the primary action agency responsible for ABGD, despite JCS direction to the contrary.

4. ISSUE: Poor location and layout of six existing air bases used by the US Air Force in Vietnam hampered the ground defense of these air bases, primarily due to close proximity of population centers to air base perimeters.

RESOLUTION: None.

5. ISSUE: There was a lack of US Air Force criteria for construction of air bases in combat areas.

RESOLUTION: None.

THE THREAT

6. ISSUE: Host nation agreements with the civilian populace allowed uncontrolled civilian access onto one of the six older air bases.

RESOLUTION: None.

7. ISSUE: Difficulties in controlling vegetation growth both on and off base enhanced threat approach and concealment.

RESOLUTION: None.

8. ISSUE: Key support facilities were sited improperly on the air bases.

RESOLUTION: None.

9. ISSUE: Aircraft were inadequately dispersed on the air bases.

RESOLUTION: Revetments and aircraft shelters were built which provided nearly complete protection for parked aircraft.

10. ISSUE: US Air Force base security doctrine focused only on internal base security against the cold war threat to air bases.

RESOLUTION: The US Air Force published AFM 206-1, dated 30 June 1969, which recognized the expanded threat in Vietnam.

11. ISSUE: How best to defend against threat standoff rocket and mortar attacks against air bases.

RESOLUTION: Seventh Air Force implemented the rocket watch program which linked US Air Force air power with US Army aviation, artillery and infantry forces.

Also, countermortar radars were installed by US Marines or US Army at several air bases.

12. ISSUE: How best to defend air bases against sapper raids.

RESOLUTION: Sentry dog teams were found to be most effective in detecting sapper raids. Additionally, ground surveillance radars, night vision devices, trip flares, and various barrier devices were employed.

13. ISSUE: How best to defend air bases against large-scale attacks.

RESOLUTION: Only two such attacks were conducted against air bases. Both attacks were successfully repelled through early intelligence warning and mobility and firepower of air base defense forces. Deployment of Combat Security Police Squadrons to Vietnam as highly-trained, tactical units was seen as the most effective means of countering large-scale attacks.

ABGD MISSIONS

14. ISSUE: Failure of the US Air Force to anticipate probable missions for security police forces defending air bases hampered the ABGD efforts in Vietnam.

RESOLUTION: The US Air Force published AFM 206-1 on 30 June 1969, which spelled out security police ABGD missions.

15. ISSUE: Lack of training of US Air Force security police forces in terms of the mission to be performed by such forces prior to deployment to the combat zone hampered ABGD operations.

RESOLUTION: Formalized in-country training of newly arrived security police personnel helped to ameliorate the issue to some degree.

16. ISSUE: Unqualified security police personnel were sent to Vietnam to perform ABGD duties due to the annual rotation of personnel out of Vietnam and lack of sufficient numbers of qualified security police personnel to send only such qualified personnel to Vietnam.

RESOLUTION: The formal US Air Force on-the-job training (OJT) program for enlisted security police members was imposed on the security police forces in Vietnam to resolve the issue. However, the working environment and lack of relevance of the OJT program to the security police mission in Vietnam negated the utility of the OJT program. The issue was thus unresolved.

17. ISSUE: Lack of US Air Force doctrine governing construction and repair of security facilities, and lack of civil engineer preparedness to perform such operations hampered ABGD efforts.

RESOLUTION: None.

18. ISSUE: Security Police forces needed weapons suited to the requirements of ABGD in an insurgent environment.

RESOLUTION: The US Air Force authorized procurement of appropriate weapons.

19. ISSUE: The need to maintain and repair ABGD weapons was hampered by lack of spare parts and lack of trained weapons maintenance personnel.

RESOLUTION: None.

20. ISSUE: Motor vehicles appropriate to ABGD operations in Vietnam were required.

RESOLUTION: The US Air Force authorized procurement of appropriate vehicles for ABGD. Such vehicles were in very short supply and the issue was not fully resolved before the end of the conflict.

21. ISSUE: The need to maintain and repair ABGD vehicles was hampered by lack of spare parts and lack of trained vehicle mechanics.

RESOLUTION: The situation was partially resolved through security police self-help efforts.

ABGD COMMAND AND CONTROL

22. ISSUE: No combined command structure was formed between US and Vietnamese forces during the Vietnam Conflict.

RESOLUTION: No formal resolution of this issue was achieved. However, some commanders were successful in gaining VNAF and ARVN cooperation on ABGD matters through tact and force of personality.

23. ISSUE: A need existed to achieve commonality of ABGD efforts between US and Vietnamese forces.

RESOLUTION: COMUSMACV implemented the security alert condition (SACON) system at all air bases. Though lack of a combined command structure allowed uncoordinated implementation of the SACON system, the system did provide for partial resolution of the issue.

24. ISSUE: How best to integrate the efforts of the US Air Force, Army and Marine forces to support ABGD requirements.

RESOLUTION: The US Army provided for varying degrees of integration ranging from provision of advisors at some air bases, to full integration of ground forces in the Saigon-Tan Son Nhut-Bien Hoa area. The Marine Amphibious Force Commander at Da Nang assumed full responsibility for ABGD at that air base, and full integration of US ABGD efforts was achieved there.

COMMUNICATIONS FOR ABGD

25. ISSUE: Tactical radios appropriate to ABGD operations in Vietnam were required by ABGD forces.

RESOLUTION: The US Air Force specified a need for such radios, but design, test, and procurement of such radios could not be accomplished prior to the end of the conflict.

INTELLIGENCE FOR ABGD

26. ISSUE: ABGD forces required timely intelligence support, which the Air Force Intelligence function was unable to provide due to lack of US Air Force ABGD doctrine.

RESOLUTION: The Air Force Office of Special Investigations (AFOSI) and the security police at the air bases developed self-help intelligence programs. Seventh Air Force Security Police also established a BDOC which monitored available intelligence and then compiled and disseminated this intelligence to air bases on a weekly basis.

END NOTES, CHAPTER 3

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2. Ibid., 12 and 204.
3. U.S. Air Force, Air Force Regulation 206-2, Volume 1, Ground Defense of Main Operating Bases, Installations, and Activities (22 September 1983): 1.
4. See Appendix B.
5. Fox, 1.
6. Ibid., 14.
7. Ibid., 12.
8. Ibid., 172.
9. Ibid., 173.
10. Ibid., 20 (quoting from the Washington Post, 8 March 1968, page A1, concerning JCS direction to CINCPAC to land elements of the Marine Expeditionary Force at Da Nang).
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29. Ibid., 41.
30. Ibid., 46.
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47. Ibid., 105.
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- 70. Ibid.
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CHAPTER 4

CURRENT US AIR FORCE ABGD DOCTRINE

INTRODUCTION

This chapter provides an analysis of current US Air Force ABGD doctrine as provided in Air Force Regulation 206-2, Volume 1, Ground Defense of Main Operating Bases, Installations, and Activities, dated 22 September 1983. This analysis employed the listing of twenty six ABGD issues developed in Chapter 3 of this thesis to determine the degree to which these issues are or are not recognized in current US Air Force ABGD doctrine. To accomplish this purpose, each of the issues within each of the six categories was listed, followed by a statement concerning resolution of the issue during the Vietnam Conflict. The current ABGD doctrine was then analyzed to find any reference to the specific issue under consideration. The result of this analysis was either that the issue was or was not recognized in current doctrine.

Discussion of each of the issues in terms of the recognition of these issues in current doctrine was then provided. The reader is cautioned that the purpose of this analysis was not to analyze the adequacy of current US Air Force ABGD doctrine. Rather, by identifying the degree to which ABGD issues which arose during the Vietnam Conflict are recognized in current US Air Force ABGD doctrine, linkages between past ABGD experiences and current ABGD doctrine are identified.

ANALYSIS OF CURRENT ABGD DOCTRINE

RESPONSIBILITIES FOR ABGD

1. ISSUE: Which military service was responsible for external ground defense of air bases during the Vietnam Conflict?

RESOLUTION: None.

CURRENT ABGD DOCTRINAL TASKING:

"The Air Force recognizes that if its resources are to be adequately protected against the threat, Air Force personnel and units charged with this responsibility must ... provide security in-depth ... by occupying a series of defensive positions on and offbase [*italics mine*] ..." (1)

DISCUSSION: As the quotation provided above indicates, the current US Air Force ABGD doctrine

represents acceptance by the US Air Force of responsibility for external air base ground defense.

2. ISSUE: There was no US Air Force ABGD doctrine available for the first nine years of US Air Force involvement in the Vietnam Conflict.

RESOLUTION: The US Air Force published AFM 206-1, Local Ground Defense of US Air Force Bases, on 30 June 1969.

CURRENT ABGD DOCTRINAL TASKING: Current US Air Force ABGD doctrine is available, in the form of AFR 206-2, Volume 1, dated 22 September 1983.

DISCUSSION: None required.

3. ISSUE: Which agency within the US Air Force was responsible for ABGD?

RESOLUTION: Not fully resolved, though the US Air Force identified the security police as the primary action agency responsible for ABGD, despite JCS direction to the contrary.

CURRENT ABGD DOCTRINAL TASKING: Paragraph 1-4 of AFR 206-2, Volume 1, dated 22 September 1983, provides a full listing of the US Air Force agencies which have responsibilities relating to ABGD.

DISCUSSION: This listing of responsibilities is provided at Appendix C to this thesis. The Air Force Office of Security Police (AFOSP) is identified as the office of primary responsibility for ABGD.

4. ISSUE: Poor location and layout of six existing air bases used by the US Air Force in Vietnam hampered the ground defense of these air bases, primarily due to close proximity of population centers to air base perimeters.

RESOLUTION: None.

CURRENT ABGD TASKING: None

DISCUSSION: Current ABGD doctrine goes into extensive detail concerning identification of enemy avenues of approach and how best to observe and place fire upon such approaches (2). At no time does the doctrine address population centers located adjacent to air bases, or how to defend against threat forces using such population centers.

5. ISSUE: Lack of US Air Force criteria for construction of air bases in combat areas.

RESOLUTION: None.

CURRENT ABGD TASKING: None.

DISCUSSION: Current ABGD doctrine refers the reader to Security Police Educational Subject Block Index 1-19 (a training publication) for illustrations of field fortifications (3), but no reference is made to air base construction criteria for a combat environment.

THE THREAT

6. ISSUE: Host nation agreements with the civilian populace allowed uncontrolled civilian access onto one of the six older air bases.

RESOLUTION: None.

CURRENT ABGD TASKING: None.

DISCUSSION: No taskings or guidance are provided in current ABGD doctrine relative to what to do if host nation agreements hamper air base entry or circulation controls.

7. ISSUE: Difficulties in controlling vegetation growth both on and off base enhanced threat approach and concealment.

RESOLUTION: None.

CURRENT ABGD TASKING: None.

DISCUSSION: Current ABGD doctrine emphasizes the importance of identifying, surveilling and targeting likely threat avenues of approach to air bases, but provides no tasking or guidance concerning how to control problem vegetation growth.

8. ISSUE: Key support facilities were sited improperly on the air bases.

RESOLUTION: None.

CURRENT ABGD TASKING: Current ABGD doctrine recognizes the problems inherent in improper defensive siting of key support facilities (4).

DISCUSSION: Current doctrine tasks the ABGD force commander to identify and prioritize key air base facilities, and to build a defensive plan which includes defense of such facilities (5).

9. ISSUE: Aircraft were inadequately dispersed on the air bases.

RESOLUTION: Revetments and aircraft shelters were built which provided nearly complete protection for parked aircraft.

CURRENT ABGD TASKING: The current ABGD doctrine recognizes the value of dispersing and sheltering aircraft (6).

DISCUSSION: Current ABGD doctrine also provides guidance on "self-help" measures which could be implemented to protect aircraft if shelters are not available (7).

10. ISSUE: US Air Force base security doctrine focused only on internal base security against the cold war threat to air bases.

RESOLUTION: The US Air Force published AFM 206-1, dated 30 June 1969, which recognized the expanded threat in Vietnam.

CURRENT ABGD TASKING: The current doctrine recognizes threats against air bases ranging from peacetime sabotage to large-scale attacks during open hostilities (8).

DISCUSSION: Current ABGD doctrine goes into great detail in describing the potential threats to air

bases. An excerpt of the current ABGD doctrine which addresses the threat is provided at Appendix D.

11. ISSUE: How best to defend against threat standoff rocket and mortar attacks against air bases.

RESOLUTION: Seventh Air Force implemented the rocket watch program which linked US Air Force air power with US Army aviation, artillery and infantry forces. Also, countermortar radars were installed by US Marines or US Army at several air bases.

CURRENT ABGD TASKING: The current ABGD doctrine recognizes the threat of standoff attacks against air bases

DISCUSSION: Current ABGD doctrine identifies measures such as

"... sending patrols, LPs, and OPs forward to positions which deny the enemy locations from which mortar, rocket, or other standoff weapons fire can be directed against priority resources." (9)

The current doctrine also recognizes that while security police are primarily responsible for ABGD, other US Air Force, sister service, and potentially allied or host nation forces may be available for use against threat attacks (10).

12. ISSUE: How best to defend air bases against sapper raids.

RESOLUTION: Sentry dog teams were found to be most effective in detecting sapper raids. Additionally, ground surveillance radars, night vision devices, trip flares, and various barrier devices were employed.

CURRENT ABGD TASKING: Current ABGD doctrine recognizes the threat of covert operations, such as sapper raids, against air bases.

DISCUSSION: Specific methods of detecting and neutralizing covert threats to air bases such as

"... sensors, surveillance, target acquisition, and night observation devices, trip flares and other warning devices ..." (11)

are noted as vital to air base defense. Military working dog teams are seen as "... a particularly vital service ..." in performing such missions (12).

13. ISSUE: How best to defend air bases against large-scale attacks.

RESOLUTION: Only two such attacks were conducted against air bases. Both attacks were successfully repelled through early intelligence warning and mobility and firepower of air base defense forces. Deployment of Combat Security Police Squadrons to Vietnam as highly-trained, tactical units was seen as the most effective means of countering large-scale attacks.

CURRENT ABGD TASKING: Current ABGD doctrine recognizes the threat of large-scale attacks against air bases.

DISCUSSION: The importance of timely intelligence support, mobility and firepower in defending against large-scale attacks is recognized and addressed in current ABGD doctrine. Additionally, security police force

organization into tactical units is specified, and employment considerations for such units are also addressed in current doctrine (13).

ABGD MISSIONS

14. ISSUE: Failure of the US Air Force to anticipate probable missions for security police forces defending air bases hampered the ABGD efforts in Vietnam.

RESOLUTION: The US Air Force published AFM 206-1 on 30 June 1969, which spelled out security police ABGD missions.

CURRENT ABGD TASKING: Clear missions for US Air Force ABGD forces are provided in current ABGD doctrine.

DISCUSSION: Current doctrine specifies that the

"... purpose of ABGD is to defeat the Level I, II, and small scale Level III threats before they can interrupt, diminish, or terminate air operations ... [and also] to delay large scale Level III and tank and motorized rifle threats (if applicable) as long as possible." (14)

The current doctrine then goes on to provide, in some detail, specific means for accomplishing the missions listed above.

15. ISSUE: Lack of training of US Air Force security police forces in terms of the mission to be performed by such forces prior to deployment to the combat zone hampered ABGD operations.

RESOLUTION: Formalized in-country training of

newly arrived security police personnel helped to ameliorate the problem to some degree.

CURRENT ABGD TASKING: Current ABGD doctrine levies specific responsibilities for training of ABGD forces on the ABGD missions listed in the preceding DISCUSSION paragraph.

DISCUSSION: Current doctrine specifies training responsibilities for agencies from the Air Staff level down through installation level to insure proficiency of ABGD forces in the missions to be performed (15).

16. ISSUE: Unqualified security police personnel were sent to Vietnam to perform ABGD duties, due to the annual rotation of personnel out of Vietnam and lack of sufficient numbers of qualified security police personnel to send only such qualified personnel to Vietnam.

RESOLUTION: The formal US Air Force on-the-job training (OJT) program for enlisted security police members was imposed on the security police forces in Vietnam to resolve the issue. However, the working environment and lack of relevance of the OJT program to the security police mission in Vietnam negated the utility of the OJT program. The issue was thus unresolved.

CURRENT ABGD TASKING: Current ABGD doctrine does not address the rotation or replacement policies which would apply to security police personnel performing ABGD missions in a combat environment.

DISCUSSION: Current doctrine levies

responsibility for training security police personnel in the ABGD missions at all levels from Air Staff to installation. The doctrine does not discuss how unqualified personnel, if sent to perform ABGD missions in a combat environment, would receive qualification training. Ultimate responsibility is placed on the Base Chief's of Security Police to "... ensure that the ABGD force is properly trained ..." (16).

17. ISSUE: Lack of US Air Force doctrine governing construction and repair of security facilities, and lack of civil engineer preparedness to perform such operations hampered ABGD efforts.

RESOLUTION: Security police employed self-help to build and repair the majority of ABGD defense facilities at the air bases.

CURRENT ABGD TASKING: Current ABGD doctrine does not specifically task the civil engineering function to provide support for security facility construction or repair.

DISCUSSION: Current ABGD doctrine does identify self-help efforts which could be used to provide protection for unsheltered aircraft (17), and refers to a security police training document for illustrations of field fortifications (18). These references in the current doctrine indicate a continued acceptance of the self-help means of constructing and repairing ABGD facilities.

18. ISSUE: Security Police forces needed weapons suited to the requirements of ABGD in an insurgent environment.

RESOLUTION: The US Air Force authorized procurement of appropriate weapons.

CURRENT ABGD TASKING: Current ABGD doctrine specifies weapons suited to the ABGD mission as being available for performance of this mission (19).

DISCUSSION: Weapons to be used for ABGD operations are listed in the current ABGD doctrine, and Appendix E of this thesis provides an excerpt from the doctrine providing this weapons listing.

19. ISSUE: The need to maintain and repair ABGD weapons was hampered by lack of spare parts and lack of trained weapons maintenance personnel.

RESOLUTION: None.

CURRENT ABGD TASKING: The current ABGD doctrine identifies the Air Force Logistics Command (AFLC) as responsible for managing the "...support of equipment designated for the ABGD program." (20)

DISCUSSION: No specific reference is made in current doctrine to spare parts or maintenance support for ABGD weapons. However, AFOSP is tasked to provide "...management requirements for ...operating ...arms ...in support of ABGD programs." (21)

20. ISSUE: Motor vehicles appropriate to ABGD operations in Vietnam were required.

RESOLUTION: The US Air Force authorized procurement of appropriate vehicles for ABGD. Such vehicles were in very short supply and the issue was not fully resolved before the end of the conflict.

CURRENT ABGD TASKING: The current ABGD doctrine identifies mounted ABGD unit operations as being performed using high mobility multipurpose wheeled vehicles (HMMWV) (22).

DISCUSSION: The HMMWV is the only type of vehicle addressed in current ABGD doctrine. Reference is also made to "...the vehicles in the flight transport package ..." (23), but no description of the vehicles included in the package is provided.

21. ISSUE: The need to maintain and repair ABGD vehicles was hampered by lack of spare parts and lack of trained vehicle mechanics.

RESOLUTION: The situation was partially resolved through security police self-help efforts.

CURRENT ABGD TASKING: The current ABGD doctrine identifies Air Force Logistics Command as responsible for managing the "... support of equipment designated for the ABGD program." (24)

DISCUSSION: No specific reference is made in current ABGD doctrine to maintenance or repair of vehicles supporting ABGD operations. Additionally, AFOSP is not

listed as being responsible for managing requirements for ABGD vehicles.

ABGD COMMAND AND CONTROL

22. ISSUE: No combined command structure was formed between US and Vietnamese forces during the Vietnam Conflict.

RESOLUTION: No formal resolution of this issue was achieved. However, some commanders were successful in gaining VNAF and ARVN cooperation on ABGD matters through tact and force of personality.

CURRENT ABGD TASKING: Several references to command relationships for the purposes of ABGD are provided in current doctrine:

a. "Forces of ... other nations assigned to Air Force air bases for the primary purpose of local base defense should be placed under the operational control of the base commander." (25)

b. "Depending on the command and control relationships established by the theater commander, the base CSP [chief of security police] may or may not be the BDOC [base defense operations center] commander. However, regardless of the established command and control relationship, the base CSP always commands and controls the US Air Force ABGD force in the name of the senior US Air Force commander present on the installation." (26)

DISCUSSION: Current ABGD doctrine clearly establishes the command and control relationship for US Air Force ABGD forces at installation level, and recognizes that the theater commander will establish overall command

and control relationships.

23. ISSUE: A need existed to achieve commonality of ABGD efforts between US and Vietnamese forces.

RESOLUTION: COMUSMACV implemented the security alert condition (SACON) system at all air bases. Though lack of a combined command structure allowed uncoordinated implementation of the SACON system, the system did provide for partial resolution of the issue.

CURRENT ABGD TASKING: In addition to the taskings listed in the CURRENT ABGD TASKING section above, current doctrine calls for coordination and intelligence exchange between host nation and US Air Force ABGD operations centers (27).

DISCUSSION: Current ABGD doctrine clearly establishes the BDOC as the agency responsible for integration of all ABGD efforts, both with US forces and with host nation forces under the operational control of the BDOC (28).

24. ISSUE: How best to integrate the efforts of the US Air Force, Army and Marine forces to support ABGD requirements.

RESOLUTION: The US Army provided for varying degrees of integration ranging from provision of advisors at some air bases, to full integration of ground forces in the Saigon-Tan Son Nhut-Bien Hoa area. The Marine Amphibious Force Commander at Da Nang assumed full responsibility for ABGD at that air base, and full

integration of US ABGD efforts was achieved there.

CURRENT ABGD TASKING: Current ABGD doctrine identifies the requirement to ensure coordination of ABGD efforts with all US forces which are tasked with supporting ABGD operations (29).

DISCUSSION: None required.

COMMUNICATIONS FOR ABGD

25. ISSUE: Tactical radios appropriate to ABGD operations in Vietnam were required by ABGD forces.

RESOLUTION: The US Air Force specified a need for such radios, but design, test, and procurement of such radios could not be accomplished prior to the end of the conflict.

CURRENT ABGD TASKING: A separate chapter in the current ABGD doctrine is dedicated to communications for ABGD operations. Specific requirements for this communications system are excerpted from current doctrine and provided at Appendix F.

DISCUSSION: In addition to specifying the requirements for the ABGD communications system, the current ABGD doctrine also identifies the Air Force Communications Command local communications unit as responsible for maintenance of this communications system (30). Additional guidance is also provided concerning peacetime and wartime maintenance support.

INTELLIGENCE FOR ABGD

26. ISSUE: ABGD forces required timely intelligence support, which the Air Force intelligence function was unable to provide due to lack of US Air Force ABGD doctrine.

RESOLUTION: The Air Force Office of Special Investigations (AFOSI) and the security police at the air bases developed self-help intelligence programs. Seventh Air Force Security Police also established a BDOC which monitored available intelligence and then compiled and disseminated this intelligence to air bases on a weekly basis.

CURRENT ABGD TASKING: Current ABGD doctrine identifies US Air Force Intelligence as responsible for support of ABGD operations (31). Additionally, AFOSI and security police ABGD BDOCs are identified as responsible for some aspects of the ABGD intelligence program (32).

DISCUSSION: An entire chapter in the current ABGD doctrine is devoted to intelligence support of ABGD operations. The chapter referring to intelligence support provides very explicit guidance on responsibilities for support of ABGD at all levels from Air Staff to installation level (33).

SUMMARY

This chapter has presented the analysis of current ABGD doctrine, based upon the categorized listing of ABGD issues generated in Chapter 3. The results of the analysis show that twenty of the issues which arose during US Air Force ABGD operations in Vietnam are recognized by current US Air Force ABGD doctrine. Six of these issues are not recognized in current US Air Force ABGD doctrine.

The issues which are recognized are listed below by category:

1. RESPONSIBILITIES FOR ABGD: Issues 1, 2, and 3.
2. THE THREAT: Issues 8, 9, 10, 11, 12, and 13.
3. ABGD MISSIONS: Issues 14, 15, 18, 19, 20, and 21.
4. ABGD COMMAND AND CONTROL: Issues 22, 23, and 24.
5. COMMUNICATIONS FOR ABGD: Issue 25.
6. INTELLIGENCE FOR ABGD: Issue 26.

The issues which are not recognized are listed below by category:

1. RESPONSIBILITIES FOR ABGD: Issues 4 and 5.
2. THE THREAT: Issues 6 and 7.

3. ABGD MISSIONS: Issues 16 and 17.
4. ABGD COMMAND AND CONTROL: none.
5. COMMUNICATIONS FOR ABGD: none.
6. INTELLIGENCE FOR ABGD: none.

Those issues not recognized in current US Air Force ABGD doctrine relate to the poor location and layout of existing air bases which had to be defended by US Air Force personnel; lack of criteria for air base construction in combat areas; host nation agreements detrimental to ABGD operations; vegetation control difficulties; the effects of rotation and replacement policies applicable to ABGD forces; and, lack of tasking of civil engineers to support construction and repair of ABGD facilities. The implications of these unrecognized issues are explored in Chapter 5.

END NOTES, CHAPTER 4

1. U.S. Air Force, Air Force Regulation 206-2, Volume 1, Ground Defense of Main Operating Bases, Installations, and Activities (22 September 1983): 4.
2. Ibid., 98.
3. Ibid., 62.
4. Ibid., 60.
5. Ibid., 60-61.
6. Ibid., 60.
7. Ibid.
8. Ibid., 7.
9. Ibid., 10.
10. Ibid., 26-27.
11. Ibid., 26.
12. Ibid.
13. Ibid., 16-19.
14. Ibid., 19-20.
15. Ibid., 4-6.
16. Ibid., 6.
17. Ibid., 60.
18. Ibid., 62.
19. Ibid., Attachment 4.
20. Ibid., 5.
21. Ibid., 4-5.
22. Ibid., 13.

23. Ibid.
24. Ibid., 5.
25. Ibid., 6.
26. Ibid., 34.
27. Ibid., 36.
28. Ibid., 34.
29. Ibid.
30. Ibid., 40.
31. Ibid., Chapter 5.
32. Ibid., 5.
33. Ibid., Chapter 5.

CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS

CONCLUSIONS

This study identifies twenty linkages between issues which arose in US Air Force ABGD operations during the Vietnam Conflict and current US Air Force ABGD doctrine, while six issues are currently not addressed. The purpose of this study has been to identify the degree to which issues which arose as a result of US Air Force ABGD operations during the Vietnam Conflict are or are not recognized in current US Air Force ABGD doctrine. This effort was undertaken to identify existing links between past ABGD experiences and current doctrine so as to allow for greater understanding of the basis for current doctrine. This increased understanding of the foundations for current ABGD doctrine will enhance the preparation of ABGD forces to execute their tasks. Additionally, this understanding will assist ABGD planners in the continuing refinement of ABGD doctrine.

Both Holley and Drew emphasize that when developing and assessing doctrine, recognizing what past experience has taught is of key importance. Current US Air Force ABGD doctrine does not provide any substantive reference to the historical precedents applicable to its development.

Thus, this thesis provides both a methodology for identifying linkages between past issues and current doctrine, and some specific linkages between issues which arose during a past conflict involving ABGD and current ABGD doctrine.

RECOMMENDATIONS FOR FURTHER STUDY

The following recommendations for further study suggest possible avenues for review of the methodology applied in this thesis; for further applications of this methodology; and, for study of the specific results of this thesis.

1. Is the methodology developed and applied in this thesis a valid means of identifying linkages between what has been learned from past experiences and the taskings of current doctrine?

2. If the methodology used in this thesis is valid, its application in identifying historical precedents for other US Air Force doctrinal taskings would be useful. As noted in Chapter 1, Holley finds most US Air Force doctrine focused almost entirely on the present, and this thesis validates his observation in terms of US Air Force ABGD doctrine.

3. In terms of the specific results of this study concerning US Air Force ABGD doctrine, should current doctrine recognize the six issues which arose during the Vietnam Conflict and which are currently not recognized?

4. What other historical experiences besides those documented during the Vietnam Conflict provide reliable historical data which could be used to further establish an historical foundation for current ABGD doctrine?

5. Are there other issues which arose concerning ABGD operations during the Vietnam Conflict which are not identified in this thesis?

6. Are there other US Air Force sources of doctrine which do or do not address ABGD which should be analyzed in addition to AFR 206-2, Volume 1? For example, as stated in Chapter 2, Air Force Manual 1-1, Functions and Basic Doctrine of the United States Air Force, published on 14 February 1979, mentions the need for air base ground defense, while the draft of its update makes no mention of air base ground defense. Should this draft include such a reference?

7. As US Army doctrine concerning rear area protection is developed and published, and as the US Air Force continues to develop and refine ABGD doctrine, are these two closely-related sets of doctrine well coordinated and integrated to reflect the degree of interrelationship between the two which will certainly be encountered in future conflicts?

IMPLICATIONS

The importance of the lessons learned from historical experience to current doctrine and activities is well established. No less important to doctrinal development is recognition of current threat capabilities and the impact of technological advances on both US and threat military capabilities and strategy. Focusing on any one of these key areas to the exclusion of the others could weaken the foundations on which current doctrine is built.

This thesis in no way implies that historical experiences must be the sole basis for doctrinal development. Rather, this thesis recognizes history as a valuable source of information for doctrinal development and refinement. By identifying the six issues concerning past ABGD operations which are not recognized in current US Air Force ABGD doctrine, this thesis is of use in assisting ABGD planners in assessing the current doctrine.

The twenty issues recognized by current doctrinal taskings are also valuable to doctrinal assessment. From the historical perspective these issues may well justify current doctrine. But, when current threat capabilities and technological advances are considered, perhaps the taskings require adjustment, or perhaps some of the taskings are no longer appropriate.

With each passing year the security police veterans of Vietnam on active duty in the Air Force grow fewer, and the opportunities for discussions concerning Vietnam with these veterans are steadily reduced. This thesis contributes to the education of those security police personnel who have no firsthand experience of the issues which arose during that conflict. Therefore, this thesis provides a source of information concerning ABGD in Vietnam which will become increasingly useful to non-Vietnam veterans with each passing year.

APPENDIX A

APPENDIX A

CHRONOLOGY OF VC/NVA ATTACKS

ON THE TEN PRIMARY USAF OPERATING BASES IN RVN

1961-1973

SOURCE: Fox, Roger P., Air Base Defense in the Republic of Vietnam 1961-1973, Appendix 1.

The source of this appendix is provided as an excerpt in this appendix. The data compiled and provided by Fox, and listed on the following pages, was used to identify the types and effectiveness of the various forms of VC/NVA attack against the ten primary air bases used by the US Air Force during the Vietnam Conflict.

**Chronology of VC/NVA Attacks
On the Ten Primary USAF Operating Bases in RVN
1961-1973 ***

Attacks										US Losses				RVN Losses				VC/NVA Losses							
		MO		DA		HR		BASE		TYPE		RDS		Aircraft		Casualties		Aircraft		Casualties		KIA		POW	
NO	YR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18								

Key

Column 1: Sequence of attacks.

Column 2 through 5: Local RVN date and time.

Column 6: Bases: Bien Hoa (BH); Binh Thuy (BT);
Cam Ranh Bay (CBR); Da Nang (DN); Nha
Trang (NT); Phan Rang (PR); Phu Cat
(PC); Pleiku (PK); Tuy Hoa (TH); Tan Son
Nhut (TSN).

Column 7: Type of attacks: Standoff (STO); Sapper
(SAP); Standoff and Sapper (SSS); Multi-
Battalion (MBN); Sabotage (SAB); Auto-
matic Weapons (AWP).

Column 8: Standoff rounds impacting on bases.
Columns 9 and 13: Destroyed (DES).
Columns 10 and 14: Damaged (DAM).
Columns 11, 15, and 17: Killed in Action (KIA).
Columns 12 and 16: Wounded in Action (WIA).
Column 18: Prisoner of War (POW).
All Columns: Not Reported (NR).

* Prepared by author.

NO	Attacks					US Losses				RVN Losses				VC/NVA Losses			
	YR	MO	DA	HR	BASE	TYPE	RDS	Aircraft		Casualties		Aircraft		Casualties		Casualties	
	1	2	3	4	5	6	7	DES	DAM	KIA	WTA	DES	DAM	KIA	WTA	KIA	POW
013	67	01	07	0140	PK	STO	32	000	000	000	000	000	000	000	000	000	000
014	67	01	12	0140	BT	STO	67	000	005	000	009	000	000	000	000	000	000
015	67	02	07	0050	BH	SAB*		000	000	000	000	000	000	000	000	000	000
016	67	02	08	0240	BT	STO	56	000	011	000	000	000	000	000	000	000	000
017	67	02	15	0120	NT	SAP		003	005	000	000	000	000	000	000	000	000
018	67	02	27	0310	DN	STO**	56	000	013	011	124	000	000	035	050	000	000
019	67	03	15	0200	DN	STO	10	000	007	000	000	NR	NR	NR	NR	NR	NR
020	67	03	27	0006	BT	STO	35	000	002	000	000	NR	NR	NR	NR	NR	NR
021	67	05	07	2250	BT	STO	69	000	004	000	000	000	000	000	000	NR	NR
022	67	05	12	0101	BH	STO	189	002	032	006	031	002	NR	NR	NR	NR	NR
023	67	07	15	0020	DN	STO	83	010	049	008	175	000	001	NR	NR	NR	NR
024	67	09	02	0050	DN	STO	09	000	006	000	008	NR	NR	NR	NR	NR	NR
025	67	09	07	0047	TH	AWT		000	000	001	003	000	000	000	000	003	000

*Resulted in the destruction of 2600 napalm bombs valued at \$342,000.

**The first time rockets were employed in RVN by VC/NVA.

NO	Attacks					US Losses				RVN Losses				VC/NVA Losses			
	YR	MO	DA	HR	BASE	TYPE	RDS	Aircraft		Casualties		Aircraft		Casualties		Casualties	
	1	2	3	4	5	6	7	DES	DAM	KIA	WTA	DES	DAM	KIA	WTA	KIA	POW
013	67	01	07	0140	PK	STO	32	000	000	000	000	000	000	000	000	000	000
014	67	01	12	0140	BT	STO	67	000	005	000	009	000	000	000	000	000	000
015	67	02	07	0050	BH	SAB*		000	000	000	000	000	000	000	000	000	000
016	67	02	08	0240	BT	STO	56	000	011	000	000	000	000	000	000	000	000
017	67	02	15	0120	NT	SAP		003	005	000	000	000	000	000	000	000	000
018	67	02	27	0310	DN	STO**	56	000	013	011	124	000	000	035	050	000	000
019	67	03	15	0200	DN	STO	10	000	007	000	000	NR	NR	NR	NR	NR	NR
020	67	03	27	0006	BT	STO	35	000	002	000	000	NR	NR	NR	NR	NR	NR
021	67	05	07	2250	BT	STO	69	000	004	000	000	000	000	000	000	NR	NR
022	67	05	12	0101	BH	STO	189	002	032	006	031	002	NR	NR	NR	NR	NR
023	67	07	15	0020	DN	STO	83	010	049	008	175	000	001	NR	NR	NR	NR
024	67	09	02	0050	DN	STO	09	000	006	000	008	NR	NR	NR	NR	NR	NR
025	67	09	07	0047	TH	AWT		000	000	001	003	000	000	000	000	003	000

*Resulted in the destruction of 2600 napalm bombs valued at \$342,000.

**The first time rockets were employed in RVN by VC/NVA.

Attacks				US Losses				RVN Losses				VC/NVA Losses			
NO	YR	MO	DA	HR	BASE	TYPE	RDS	Aircraft DES	DAM	Casualties KIA	WTA	Aircraft DES	DAM	Casualties KIA	WTA
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
026	67	09	09	0005	DN	STO	03	000	002	002	010	NR	NR	NR	NR
027	67	10	10	0106	NT	STO	16	000	000	000	001	000	000	NR	NR
028	67	11	05	2240	BH	STO	15	000	000	000	002	000	000	NR	NR
029	67	11	26	0010	NT	STO	30	001	003	000	021	000	000	NR	NR
017	1967 Sub-Total				515	016	139	028	384	002	001	035	050	003	000
030	68	01	03	0400	DN	STO	49	001	020	000	002	000	000	NR	NR
031	68	01	20	0040	PK	STO	08	000	000	000	022	000	000	NR	NR
032	68	01	30	0214	PK	STO	13	000	002	000	001	000	000	NR	NR
033	68	01	30	0328	DN	STO	40	005	025	001	000	NR	NR	NR	NR
034	68	01	31	0300	BH	MBN	45	002	017	004	026	000	000	NR	139*
035	68	01	31	0320	TSN	MBN	NR	000	013	023	086	000	000	032	089
036	68	01	31	2318	NT	STO	02	000	000	000	000	000	000	000	000
037	68	02	03	1930	BT	STO	09	000	000	000	000	000	000	000	000
038	68	02	04	0300	IT	STO	73	000	016	001	005	NR	NR	NR	NR

*This data is limited to enemy losses incurred inside the air base perimeters.

[illegible]

Attacks					US Losses			RVN Losses			VC/NVA Losses		
NO	YR	MO	DA	HR	BASE	TYPE	RDS	Aircraft	Casualties	Aircraft	Casualties	Aircraft	Casualties
1	2	3	4	5	6	7	8	DIES	DAM	DIES	DAM	KIA	POW
								9	10	11	12	13	14
												15	16
												17	18
055	68	02	19	0157	TSN	STO	02	(Losses are included with those cited for Attack No. 73)					
056	68	02	19	0352	TSN	STO	02	(Losses are included with those cited for Attack No. 73)					
057	68	02	19	0515	TSN	STO	03	(Losses are included with those cited for Attack No. 73)					
058	68	02	19	0602	TSN	STO	05	(Losses are included with those cited for Attack No. 73)					
059	68	02	20	1203	TSN	STO	01	(Losses are included with those cited for Attack No. 73)					
060	68	02	20	1855	TSN	STO	02	(Losses are included with those cited for Attack No. 73)					
061	68	02	21	1202	TSN	STO	01	(Losses are included with those cited for Attack No. 73)					
062	68	02	21	1634	TSN	STO	03	(Losses are included with those cited for Attack No. 73)					
063	68	02	22	0120	PK	STO	18	000	000	000	001	000	NR
064	68	02	23	0105	BT	STO	56	000	000	000	003	000	NR
065	68	02	24	0100	TSN	STO	20	(Losses are included with those cited for Attack No. 73)					
066	68	02	24	2255	DN	STO	10	000	004	000	001	NR	NR
067	68	02	26	0001	BT	STO	33	000	000	000	000	004	NR
068	68	02	27	0120	TSN	STO	03	(Losses are included with those cited for Attack No. 73)					
069	68	02	27	0525	TSN	STO	04	(Losses are included with those cited for Attack No. 73)					
070	68	02	28	0101	BT	STO	32	000	005	014	024	NR	NR

NO	Attacks				US Losses				RVN Losses				VC/NVA Losses								
	YR	MO	DA	IR	BASE	TYPE	RDS	Aircraft		Casualties		DES	Aircraft		Casualties		KIA	Casualties			
								7	8	DES	DAM		KIA	WTA	DES	DAM		KIA	WTA		
																				1	2
086	68	03	22	0138	BH	STO	09	000	005	000	012	000	000	000	000	000	000	000	000	NR	NR
087	68	03	25	0032	BT	STO	85	001	004	001	001	002	025	000	007	000	000	000	000	NR	NR
088	68	04	01	NR	TH	SAP		000	000	000	000	000	000	000	000	000	000	000	000	000	000
089	68	04	02	0301	PK	STO	21	000	000	000	000	000	000	000	000	000	000	000	000	NR	NR
090	68	04	05	2217	BH	STO	12	000	000	001	014	000	000	000	000	000	000	000	000	NR	NR
091	68	04	09	2107	BT	STO	30	000	000	000	000	000	000	000	000	000	000	000	000	NR	NR
092	68	04	13	2250	BT	STO	35	000	000	000	000	000	000	000	000	000	000	000	000	NR	NR
093	68	05	03	0124	TH	STO	24	000	000	000	000	000	000	000	000	000	000	000	000	NR	NR
094	68	05	05	0100	PK	STO	11	002	000	000	011	000	000	000	000	000	000	000	000	000	000
095	68	05	05	0152	DM	STO	01	000	000	000	000	000	000	000	000	000	000	000	000	NR	NR
096	68	05	05	0259	BH	STO	74	000	013	000	011	000	000	000	000	000	000	000	000	NR	NR
097	68	05	05	0600	BH	STO	07	000	000	000	000	000	000	000	000	000	000	000	000	000	000
098	68	05	06	0616	TSN	STO	10	000	000	000	000	000	000	000	000	000	000	000	000	000	000
099	68	05	07	0343	TSN	STO	11	000	001	000	000	000	000	000	000	002	000	000	000	000	000
100	68	05	07	1930	BH	STO	01	000	000	000	000	NR	NR	NR	NR	NR	NR	NR	000	000	000
101	68	05	08	0300	TSN	STO	14	000	000	000	000	000	000	000	000	000	000	000	000	000	000
102	68	05	08	1800	PK	STO	06	000	002	000	000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

Attacks										US Losses				RVN Losses				VC/NVA Losses			
NO	YR	MO	DA	HR	BASE	TYPE	RDS	Aircraft		Casualties		Aircraft		Casualties		Aircraft		Casualties			
								DES	DAM	KIA	WJA	DES	DAM	KIA	WJA	DES	DAM	KIA	WJA		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
167	69	02	25	0635	PK	STO	01	000	000	000	000	000	000	000	000	000	000	000	000		
168	69	03	15	0117	PR	STO	34	000	000	000	002	000	000	000	000	000	000	000	000		
169	69	03	15	0554	PR	STO	07	000	000	000	000	000	000	000	000	000	000	000	000		
170	69	03	16	1904	PR	STO	05	000	000	000	001	000	000	000	000	000	000	000	000		
171	69	03	19	0235	PR	STO	36	000	000	000	000	000	000	000	000	000	000	000	000		
172	69	03	21	0055	GRB	STO	07	000	000	000	000	000	000	000	000	000	000	000	000		
173	69	03	21	0154	DN	STO	05	000	000	000	000	000	000	000	000	000	000	000	000		
174	69	03	21	0624	PK	STO	03	000	000	000	006	000	000	000	001	000	000	000	000		
175	69	03	21	2254	PR	STO	25	000	000	000	000	000	000	000	000	000	000	000	000		
176	69	03	24	0234	PR	STO	41	000	000	000	000	000	000	000	000	000	000	000	000		
177	69	03	24	0530	DN	STO	14	000	000	000	001	000	000	000	000	000	000	000	000		
178	69	03	27	2229	PK	STO	01	000	000	000	000	000	000	000	000	000	000	000	000		
179	69	03	29	0220	BH	DTO	02	000	000	000	001	000	000	000	000	000	000	000	000		
180	69	03	31	2347	BH	STO	02	000	000	000	000	000	000	000	000	000	000	000	000		
181	69	04	13	0128	PR	STO	13	000	000	000	000	000	000	000	000	000	000	000	000		
182	69	04	16	0227	PG	SAP		000	000	000	001	000	000	000	000	001	000	000	000		

Attacks				US Losses				RVN Losses				VC/NVA Losses			
NO	YR	MO	DA	HR	BASE	TYPE	EDS	Aircraft	Casualties	Aircraft	Casualties	Aircraft	Casualties	KIA	POW
1	2	3	4	5	6	7	8	DES	DAM	DES	DAM	DES	DAM	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
215	69	06	12	2350	III	STO	30	000	000	(XN)	(XN)	000	000	000	000
216	69	06	16	1952	BH	STO	04	000	001	000	000	000	000	000	000
217	69	06	17	2333	PC	STO	18	000	000	001	001	000	000	000	000
218	69	06	18	0050	BH	STO	09	000	000	000	006	000	000	000	000
219	69	06	18	2359	PR	STO	14	000	000	000	001	000	000	000	000
220	69	06	20	1924	PR	STO	04	000	001	000	000	000	000	000	000
221	69	06	20	2147	BH	STO	08	000	000	000	000	000	000	000	000
222	69	06	29	2210	TSN	STO	03	000	000	000	000	000	000	000	000
223	69	07	08	2351	CRB	STO	12	000	000	000	000	000	000	000	000
224	69	07	10	0701	BH	STO	04	000	000	000	000	000	000	000	000
225	69	07	10	2040	BT	STO	01	000	000	000	000	000	000	000	000
226	69	07	15	1543	PR	STO	03	000	000	000	000	000	000	000	000
227	69	07	19	2325	PR	STO	11	000	000	000	000	000	000	000	000
228	69	07	20	0614	III	STO	29	000	000	000	000	000	000	000	000
229	69	07	20	0649	PR	STO	03	000	000	000	000	000	000	000	000
230	69	08	07	0056	CRB	STO	22	000	010	000	002	000	000	000	000

NO	Attacks					US Losses				RVN Losses				VC/NVA Losses		
	YR	MO	DA	HR	BASE	TYPE	RDS	Aircraft		Casualties		Aircraft	CASUALTIES	KIA	POW	WIA
								DES	DAM	KIA	WIA	DES	DAM	KIA	WIA	WIA
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
278	70	03	07	0629	CRB	STO	03	000	000	000	000	000	000	000	000	000
279	70	03	12	0318	CRB	STO	04	000	000	000	000	000	000	000	000	000
280	70	03	14	2125	PR	STO	07	000	000	000	000	000	000	000	000	000
281	70	04	01	0024	PR	STO	12	000	000	000	000	000	000	000	000	000
282	70	04	01	0620	BH	STO	05	000	001	000	000	000	000	000	000	000
283	70	04	01	0935	PR	STO	02	000	000	000	000	000	000	000	000	000
284	70	04	04	0005	BH	STO	02	000	000	000	000	000	000	000	000	000
285	70	04	04	0500	PC	SAP		000	000	000	000	000	000	000	001	000
286	70	04	05	1513	PR	STO	01	000	000	000	000	000	000	000	000	000
287	70	04	06	1621	NT	STO	11	000	000	000	002	000	000	001	004	000
288	70	04	07	2325	PR	STO	06	000	000	000	000	000	000	000	000	000
289	70	04	08	0225	DN	STO	04	000	000	002	008	000	000	000	000	000
290	70	04	08	0227	CRB	STO	04	000	000	000	000	003	000	000	000	000
291	70	04	09	1021	PR	STO	01	000	000	000	000	000	000	000	000	000
292	70	04	19	1023	CRB	STO	03	000	000	000	000	000	000	000	000	000
293	70	04	20	0657	PR	STO	01	000	000	000	001	000	000	000	000	000

NO	Attacks				US Losses				RVN Losses				VC/NVA Losses			
	YR	MO	DA	HR	BASE	TYPE		RDS	Aircraft		Casualties		Aircraft		Casualties	
	1	2	3	4	5	6	7	8	DES	DAM	KIA	WIA	DES	DAM	KIA	WIA
									9	10	11	12	13	14	15	16
294	70	05	03	00	15	PR	SWS	12	000	000	000	001	000	000	000	000
295	70	05	03	01	10	BH	STO	06	000	000	000	000	000	000	000	000
296	70	05	03	06	09	BH	STO	04	001	000	000	000	000	000	000	000
297	70	05	03	18	06	BH	STO	07	000	000	000	023	000	000	000	000
298	70	05	04	06	05	BH	STO	03	000	000	000	000	000	000	000	000
299	70	05	06	21	05	PR	STO	06	000	000	000	000	000	000	000	000
300	70	05	07	09	43	PK	STO	05	000	000	000	000	000	000	000	000
301	70	05	07	11	04	PR	STO	01	000	000	000	000	000	000	000	000
302	70	05	08	00	44	TH	STO	32	000	000	000	000	000	000	000	000
303	70	05	08	02	58	CRB	STO	26	000	000	000	000	000	000	000	000
304	70	05	08	05	35	PC	STO	04	000	000	000	000	000	000	000	000
305	70	05	12	02	55	CRB	STO	03	000	000	000	000	000	000	000	000
306	70	05	15	20	55	PK	STO	04	000	000	000	000	000	000	000	000
307	70	05	16	21	30	PR	STO	12	000	000	000	000	000	000	000	000
308	70	05	19	08	33	CRB	STO	05	000	000	000	000	000	000	000	000
309	70	05	19	19	07	PK	STO	04	001	000	000	000	000	000	000	000

[illegible]

Attacks								US Losses				RVN Losses				VC/NVA Losses			
NO	YR	MO	DA	HR	BASE	TYPE	RDS	Aircraft		Casualties		Aircraft		Casualties		Aircraft		Casualties	
								DES	DAM	KIA	WIA	DES	DAM	KIA	WIA	DES	DAM	KIA	POW
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
341	70	08	30	0219	CRB	S&S*	07	000	000	000	003	000	000	000	000	000	000		
342	70	08	30	0448	PC	STO	06	000	000	000	000	000	000	000	000	000	000		
343	70	08	30	0650	NT	STO	03	000	000	000	000	000	000	000	006	000	000		
344	70	08	31	1434	PR	STO	01	000	000	000	001	000	000	000	000	000	000		
345	70	09	01	0449	DN	STO	08	000	001	000	002	000	000	000	000	000	000		
346	70	09	04	2347	PK	STO	02	000	000	000	000	000	000	000	000	000	000		
347	70	09	16	0020	BT	STO	03	000	000	000	000	000	000	000	000	000	000		
348	70	10	04	1019	PR	STO	02	000	000	000	000	000	000	000	000	000	000		
349	70	10	05	0312	PC	STO	02	000	000	000	000	000	000	000	000	000	000		
350	70	10	12	0030	DN	STO	02	000	000	000	000	000	000	000	000	000	000		
351	70	10	21	0145	DN	STO	01	000	000	000	000	000	000	000	000	000	000		
352	70	11	08	1014	PR	STO	01	000	000	000	001	000	000	000	000	000	000		
353	70	11	17	0518	BH	STO	28	000	000	003	023	000	000	002	011	000	000		

*Resulted in destruction of 460,000 gallons of aviation fuel and of fuel storage tanks with a combined capacity of over 2.25 million gallons.

Attacks				US Losses				RVN Losses				VC/NVA Losses			
NO	YR	MO	DA	HR	BASE	TYPE	RDS	Aircraft	Casualties	Aircraft	Casualties	Aircraft	Casualties	KIA	POW
1	2	3	4	5	6	7	8	DES	DAM	DES	DAM	DES	DAM	KIA	POW
								9	10	11	12	13	14	15	16
354	70	11	21	2338	PK	STO	05	000	000	000	000	000	000	000	000
355	70	11	23	0703	PK	STO	03	000	000	000	000	000	000	000	000
356	70	11	24	2340	PK	STO	17	000	000	000	000	000	000	000	000
357	70	11	25	0112	PK	STO	01	000	000	000	000	000	000	000	000
358	70	11	29	1058	PR	STO	02	000	000	000	001	000	000	000	000
359	70	12	01	1928	CRB	STO	03	003	000	000	008	000	000	001	000
360	70	12	02	0515	PC	STO	03	000	000	000	005	000	000	000	000
361	70	12	06	0544	CRB	STO	04	000	000	000	000	000	000	000	000
362	70	12	16	2018	BH	STO	01	000	000	000	000	000	000	000	000
363	70	12	21	0100	DN	STO	01	000	000	000	000	000	000	000	000
364	70	12	29	0604	PK	STO	02	000	000	000	000	000	000	000	000
106	1970 Sub-Total				177	002	028	010	119	000	000	005	023	005	002
365	71	01	22	0458	BH	STO	01	000	000	000	000	000	000	000	000
366	71	02	01	0352	DN	STO	08	000	002	000	003	000	000	000	000
367	71	02	01	0508	NT	STO	NR	000	000	000	000	000	000	000	000
368	71	02	01	0610	PC	STO	06	000	000	000	001	000	000	000	000

Attacks					US Losses				RVN Losses				VC/NVA Losses			
NO	YR	MO	DA	JR	BASE	TYPE	RDS	Aircraft	Casualties	Aircraft	Casualties	Aircraft	Casualties	Aircraft	Casualties	
1	2	3	4	5	6	7	8	DES	DAM	DES	DAM	DES	DAM	DES	DAM	
385	71	03	31	0245	PK	S&S	12	000	013	000	000	000	004	000	000	000
386	71	04	04	0612	PK	STO	03	000	000	000	000	000	000	000	000	000
387	71	04	05	0202	DN	STO	03	000	001	000	000	000	000	000	000	000
388	71	04	09	0054	DN	STO	01	000	000	000	000	000	000	000	000	000
389	71	04	16	2120	CRB	STO	03	000	000	000	000	000	000	000	000	000
390	71	04	25	2335	CRB	STO	03	000	000	000	000	000	000	000	000	000
391	71	04	26	0300	DN	STO	01	000	000	000	000	000	000	000	000	000
392	71	04	27	0207	DN	STO	05	000	000	000	000	000	000	000	000	000
393	71	04	27	0535	BT	STO	01	000	000	000	000	000	000	000	000	000
394	71	05	01	0009	BT	STO	03	000	000	000	000	000	000	000	000	000
395	71	05	05	0358	DN	STO	02	000	001	000	000	000	000	000	000	000
396	71	05	06	0539	PK	STO	03	000	000	000	000	000	000	000	000	000
397	71	05	13	0006	BT	STO	03	000	000	000	000	000	000	000	000	000
398	71	05	23	2115	CRB	SAP		000	000	000	001	000	000	000	000	000
399	71	05	30	0320	DN	STO	07	000	000	000	000	000	000	000	000	000
400	71	06	05	1702	DN	STO	06	000	000	000	000	000	006	011	000	000

Attacks				US Losses				RVN Losses				VC/NVA Losses			
NO	YR	MO	DA	IR	BASE	TYPE	RDS	Aircraft Casualties				Aircraft Casualties			
								DES	DAM	KIA	WIA	DES	DAM	KIA	WIA
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
401	71	06	07	0009	DN	STO	02	000	000	000	000	000	000	000	000
402	71	06	11	0019	CRB	STO	03	000	000	000	000	000	000	000	000
403	71	07	05	0015	DN	STO	05	000	000	005	038	000	000	000	000
404	71	07	27	2325	PR	STO	07	000	000	000	000	000	000	000	000
405	71	08	16	2319	BH	STO	02	000	000	000	000	000	000	000	000
406	71	08	25	0135	DN	STO	02	000	000	000	000	000	000	000	000
407	71	08	25	0226	CRB	S&S*	05	000	000	000	006	000	000	000	000
408	71	08	28	2347	TSH	STO	03	000	000	000	000	000	000	000	000
409	71	08	29	1920	YK	STO	06	000	000	000	001	000	000	000	000
410	71	09	13	2320	CRB	SAP		000	000	000	000	000	000	000	001
411	71	09	21	0755	PK	STO	02	000	000	000	000	000	000	000	000
412	71	09	25	0143	BH	STO	03	000	000	000	000	000	000	000	000
413	71	09	25	0854	PR	STO	03	000	000	000	000	000	000	000	000
414	71	09	29	0658	BH	STO	01	000	000	000	000	000	000	000	000
415	71	10	02	2400	DN	STO	04	000	000	000	000	000	000	000	000

*Resulted in destruction of 6,000 tons of munitions valued in excess of \$10.3 million.

NO	Attacks				BASE	TYPE	RDS	US Losses				RVN Losses				VC/NVA Losses			
	YR	MO	DA	HR				Aircraft		Casualties		Aircraft		Casualties		Casualties		KIA	POW
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	2	3	4	5		6	7	8											
416	71	10	03	0345	BH	STO	03		000	000	000	000	000	000	002	006	000	000	000
417	71	11	09	1304	PR	STO	02		000	000	000	000	000	000	000	000	000	000	000
418	71	11	15	0001	CRB	STO	04		000	000	000	000	000	000	000	000	000	000	000
419	71	11	25	0248	BH	STO	03		000	000	000	000	000	000	000	000	000	000	000
055	1971 Sub-Total				184				001	028	005	060	000	002	008	027	002	001	001
420	72	01	03	0155	DN	STO	06		000	002	000	001	000	000	000	000	000	000	000
421	72	01	12	0157	BH	SAP*			000	000	000	000	000	000	000	000	001	000	000
422	72	01	16	0432	CRB	STO	04		000	000	000	000	000	000	000	000	000	000	000
423	72	02	05	0758	PR	STO	01		000	000	000	000	000	000	000	000	000	000	000
424	72	02	09	0100	DN	STO	28		000	001	000	010	000	000	001	000	000	000	000
425	72	02	21	0310	BH	STO	05		000	000	000	002	000	000	000	000	000	000	000
426	72	02	21	0825	PR	STO	02		000	000	000	000	000	000	000	000	000	000	000
427	72	03	06	0453	CRB	STO	03		000	001	000	003	000	000	000	000	000	000	000

*Resulted in destruction of munitions valued at \$400,000.

Attacks								US Losses				RVN Losses				VC/NVA Losses			
NO	YR	MO	DA	IR	BASE	TYPE	RDS	Aircraft DES	CASUALTIES DAM	Aircraft DES	CASUALTIES DAM	Aircraft DES	CASUALTIES DAM	Aircraft DES	CASUALTIES DAM	KIA	POW		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
428	72	04	07	0108	BH	STO	04	000	000	000	000	000	000	000	000	000	000		
429	72	04	13	0004	GRB	STO	07	000	000	000	000	000	000	000	000	000	000		
430	72	04	13	0132	DN	STO	24	001	005	001	010	000	004	000	000	000	000		
431	72	04	14	2055	TSN	STO	04	000	000	000	000	000	000	000	000	000	000		
432	72	04	16	0116	DN	STO	20	000	001	000	008	000	000	000	000	000	000		
433	72	04	24	0149	DN	STO	13	000	000	000	009	000	000	000	000	000	000		
434	72	04	25	2300	DN	STO	06	000	000	000	000	000	000	000	002	000	000		
435	72	05	07	0318	DN	STO	16	001	002	000	003	000	000	000	008	000	000		
436	72	05	12	0157	DN	STO	18	000	003	000	000	000	000	005	019	000	000		
437	72	05	14	0149	DN	STO	18	000	002	000	000	000	000	005	019	000	000		
438	72	05	23	2221	BH	STO	04	000	000	000	000	000	000	002	005	000	000		
439	72	06	10	0224	DN	STO	08	000	002	000	003	000	000	000	000	000	000		
440	72	06	13	2321	DN	STO	06	000	000	000	012	000	000	000	001	000	000		
441	72	06	17	0045	DN	STO	04	000	000	000	001	000	000	000	000	000	000		
442	72	06	22	0115	DN	STO	06	000	000	000	001	000	000	000	000	000	000		
443	72	07	08	0145	DN	STO	12	000	001	001	000	000	000	000	000	000	000		
444	72	07	13	0345	DN	STO	16	000	000	000	001	000	000	001	000	000	000		

Attacks				US Losses				RVN Losses				VC/NVA Losses			
NO	YR	MO	DA	HR	BASE	TYPE	RDS	Aircraft DES	Aircraft DAM	Casualties KIA	Casualties WIA	Aircraft DES	Aircraft DAM	Casualties KIA	Casualties WIA
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
445	72	08	01	0515	BH	STO	86	000	004	001	037	000	002	006	NR
446	72	08	03	0626	DN	STO	45	000	004	001	020	000	000	000	000
447	72	08	18	0408	DN	STO		(Losses are included with those cited for Attack No. 446)							
448	72	08	18	0637	DN	STO	35	002	010	001	021	000	000	000	000
449	72	08	19	0415	DN	STO	02	000	000	000	000	000	000	000	000
450	72	08	31	0600	BH	STO	64	001	010	000	001	000	001	003	009
451	72	09	10	0952	BH	STO*	01	000	001	000	050	003	094	003	023
452	72	09	10	1745	TSN	STO	03	000	000	000	000	000	000	000	000
453	72	09	23	0500	DN	STO	27	000	003	000	000	000	000	000	000
454	72	09	27	1845	DN	STO	05	000	003	000	001	000	000	000	000
455	72	10	22	0505	BH	STO	56	000	007	000	003	000	000	002	014
456	72	10	25	0307	DN	STO	18	000	000	000	004	000	000	001	000
457	72	10	28	0302	DN	STO	27	000	008	000	003	000	000	000	000

*All, but very limited, material evidence indicated that this was a standoff attack which detonated munitions in the VNAF holding area. There was, however, a distinct possibility that these munitions were detonated by sabotage or by disregard for safety procedures.

APPENDIX B

APPENDIX B

VALIDATION OF ABGD ISSUES

The following Security Police officers currently on active duty in the US Air Force reviewed each of the twenty six issues identified in Chapter 3 of this thesis. The officers validated each of the issues applicable to the time they were stationed in Vietnam.

1. Colonel Hart J. Guenther, Chief, Aerospace Security Division, Directorate of Operations, Air Force Office of Security Police, Kirtland Air Force Base, New Mexico 87117.

2. Colonel Stephen E. Heppell, Commander, 341st Security Police Group, Malmstrom Air Force Base, Montana 59405.

3. Colonel Robert A. Owen, Jr., Deputy Chief of Security Police, Tactical Air Command, Langley Air Force Base, Virginia 23065.

4. Lieutenant Colonel Frederick B. Power, Chief, Standardization and Evaluation Division, Directorate of Security Police, Headquarters Strategic Air Command, Offutt Air Force Base, Nebraska 68113.

5. Lieutenant Colonel Michael I. Wheeler, Chief, Current Operations Branch, Base Defense Division, Directorate of Operations, Air Force Office of Security Police, Kirtland Air Force Base, New Mexico 87117.

6. Lieutenant Colonel Garth A. Wright, Deputy Group Commander, 90th Security Police Group, F.E. Warren Air Force Base, Wyoming 82001.

APPENDIX C

APPENDIX C

ASSIGNMENT OF ABGD RESPONSIBILITIES

SOURCE: AFR 206-2, Volume 1, 22 September 1983, Pages 4-6.

1. Air Force Office of Special Investigations (AFOSI) is responsible for the mission and functions specified in AFR 23-18. Certain responsibilities are of particular importance to the ground defense of Air Force bases:

(1) Conducting counterintelligence operations which include counterespionage, counterterrorism, countersabotage, and countersubversive activities in support of air base ground defense.

(2) Collecting and reporting information that is pertinent to ABGD and resources protection.

(3) Determining, along with the security police, air base ground defense investigative and counterintelligence needs and developing the collection program needed to meet those needs.

(4) Collecting, comparing, analyzing, evaluating, explaining, and disseminating information of investigatives, counterterrorism, and counterintelligence importance to ABGD force commanders.

(5) Providing personal protective and antiterrorism services for senior US Air Force officials, certain other US Government officials and foreign dignitaries, as well as other personal security and counterterrorism services according to AFRs 124-17 and 208-1.

(6) Acting as the security police ABGD force commander's focal point for all investigative, counterterrorism, and counterintelligence support.

(7) Maintaining liaison with and aiding investigative, law enforcement, intelligence, counterintelligence, and counterterrorism agencies of the United States and foreign governments in matters of mutual interest.

(8) Developing and managing Area Source Programs (ASP) to provide commanders with counterintelligence threat information.

(9) Conducting special investigations operations, including criminal and fraud investigations, to assist the commander in maintaining military order and discipline and in protecting Air Force combat resources and operators.

2. Air Force Logistics Command (AFLC):

(1) Manages the acquisition, distribution, and support of equipment designated for the ABGD program.

(2) Coordinates logistic actions supporting the ABGD program with AFOSP and HQ Air Force Communications Command (AFCC).

3. Air Force Systems Command (AFSC), through its Armament Division, Deputy for Air Base Survivability (AD/YQ), focuses, integrates, and control AFSC technology, planning, development, test, and acquisition efforts to provide an Air Force Air Base Survivability and Recovery System, consisting of the hardware, procedures, and techniques to sustain sortie generation capability in the event of theater air base attack.

4. Air Force Communications Command (AFCC):

(1) Provides maintenance for ABGD communications electronic equipment.

(2) Provides communications expertise to AFOSP and MAJCOM/SPs on communications related issues.

5. National Guard Bureau (NCB) and Headquarters Air Force Reserve (AFRES) organize, equip, and train ABGD units through normal NCB and AFRES channels and with gaining MAJCOMs, ATC, and the appropriate AFOSP office of collateral responsibility (OCR).

6. Air Training Command (ATC):

(1) Develops, operates, and maintains ABGD training programs in coordination with AFOSP.

(2) Includes ABGD training as a permanent part of the curriculum at the Air Force Security Police Academy or provides training through US Army schools.

(3) Includes in selected ATC officer and noncommissioned officer academic courses of instruction like Basic Training, Officer Training School (OTS), and Reserve Officer Training Corps (ROTC), instruction on responsibilities for ABGD and ABGD doctrine, organizations, equipment, and tactics.

7. MAJCOM Chiefs of Security Police:

(1) Along with AFOSP, organize, equip, train, and maintain security police ABGD elements according to the ABGD program document.

(2) Maintain manpower and equipment details for assigned unit type codes (UTC) and monitor UTCs to recommend updating, as required.

(3) Conduct annual training exercises for assigned ABGD elements according to AFR 125-28.

8. United States (US) Specified or Unified Commanders. According to JCS Publication 2, in a theater of operations, the US specified or unified commander:

(1) Establishes the US force composition for each air base in the theater.

(2) Designates the service that will provide the base commander and principal forces for base defense operations.

(3) Assigns the command and control relationship and ground defense responsibility for each base.

(4) Assigns the command relationship between subordinate area commanders and air base commanders.

(5) Defines each base's area of responsibility (AOR) for local ground defense.

9. Area and Subarea Commanders. US, allied, or host nation area and subarea commanders must ensure the overall defense of air bases in their assigned areas of responsibility. Specific command relationships and defense responsibilities between US, allied, or host nation area and subarea commanders and base commanders will depend on such factors as base ownership, national agreements, and mutual agreements among senior commanders.

10. Base Commanders. The officers assigned to command US Air Force bases must ensure the local defense of their installations. Forces of other services or other nations assigned to Air Force air bases for the primary purpose of local base defense should be placed under the operational control of the base commander.

11. Base Tenant Units. Tenant units of air bases must help prepare base defense plans and provide support to the base commander for local base defense during an attack or threat of an attack.

12. Base Chiefs of Security Police (CSP). The base CSP is the base commander's principal representative for ground defense and, therefore, plans, organizes, directs, coordinates, and controls base local ground defense. The CSP must also ensure that the ABGD force is properly trained.

13. Security Police Units. The principal asset available to the US Air Force base commander for ABGD is the security police (SP) force. According to the US Air Force War and Mobilization Plan, volume I (WMP-1), security police forces are tasked to protect US Air Force personnel, resources, and information from ground threats that could destroy, damage, or compromise the capability of the US Air Force to perform assigned missions.

APPENDIX D

APPENDIX D

CURRENT ABGD DOCTRINE THREAT ASSESSMENT

SOURCE: AFR 206-2, Volume 1, 22 September 1983, Pages 6-9.

1-6. The Threat:

a. The Adversary. As previously stated, the Air Force's most demanding challenge may be to fight a war in Europe, in southwest or in northeast Asia. In those areas, military forces likely to be adversaries of the United States, for the most part, use tactics, organizations, and equipment supplied by, or patterned after that of the Soviet Union. If we are to be successful in future battles, we must know and understand threat strategy, tactics, and equipment, and we must be able to use this knowledge on the battlefield to defeat the enemy.

b. Threat Military Strategy. Current threat military strategy is dominated by several key principles of war. These principles are: offense, mass, and speed, supplemented by the principle of economy of force. Threat force commanders believe that offensive action by all branches of the military produces decisive results. They believe that victory can be attained by overwhelming the enemy with large numbers of forces and weapons systems, and by moving fast and striking quickly to exploit known enemy

weaknesses or to offset enemy strengths. For example, in Europe, commanders of Warsaw Pact nations plan to rapidly achieve mass by concentrating large numbers of aircraft, tank, motorized rifle, artillery, and rocket units, echeloned in waves on the intra-German border. As these units attack our forward deployed forces, highly trained special operations forces and airborne and naval infantry units, aided by activated sleeper agents and sympathetic partisan and terrorist organizations, will conduct economy of force operations deep into the North Atlantic Treaty Organization (NATO) rear area. In Asia, other threat forces conduct similar economy of force operations using Ranger Commando units. Regardless of their name, these forces operate to disrupt the rear area, and they are an essential part of the enemy's threat strategy. Facilities and activities likely to be targeted by all of these forces include, but are not limited to:

- (1) Nuclear and conventional weapons stocks and delivery systems.

- (2) Air bases and command and control centers.

- (3) Communications facilities and links.

- (4) Class III (petroleum) and class V (ammunition) stocks.

- (5) Maintenance facilities.

- (6) Prepositioned war reserve materiel stocks (PWRMS).

(7) Reserve aircraft.

(8) Critical lines of communications (LOC), like key intersections, choke points, locks, dams, etc.

c. Threats to US Air Force Air Bases. The threats against US Air Force air bases are divided into three levels. These three levels include agent, partisan, sympathizer, and terrorist activity; special operations forces; and conventional airborne, airmobile, airlanded, and naval infantry forces. Other threats to US Air Force air bases include tank and motorized rifle units that may penetrate or break through the forward edge of the battle area (FEBA) and the main battle area into the rear of the US theater of operations; nuclear, biological, and chemical (NBC) warfare; and electronic warfare (EW). Based on the overall frontal plan of battle, the enemy front commander can select any one or all of these assets to conduct rear area combat operations (RACO). The commitment of these assets must be viewed as occurring simultaneously, rather than occurring in any particular sequence.

(1) Level I Activities. Level I activities include active agent and activated sleeper agent activities, partisan and sympathizer activities, and agent supervised or independently initiated terrorist activities conducted by terrorist organizations. The Level I threat is considered a peacetime threat that increases in frequency and transitions to a wartime threat before the beginning of open hostilities and with a rise in

hostilities.

(a) Agent Activity. Enemy military rear area actions could be supported by active agent and activated sleeper agent cells and networks. While these cells and networks primarily function as intelligence collectors, they can also be used as saboteurs, as agent provocateurs to create civil unrest, and as terrorist advisors. Agent activity must be considered, contained with, and controlled. Control of these activities is usually a combined US and host nation effort during wartime; however, it may be a sole function of the host nation police and paramilitary police forces during peacetime.

(b) Sympathizers. Many people sympathetic to our adversaries are included in the population of countries where US Air Force air bases are or will be located. While they are not a part of any organized threat military activity, these individuals present a threat to military personnel and facilities in the rear area. They may be receptive to recruitment by agents or act alone or in collaboration with other sympathizers. Their activities will usually be confined to random acts against targets of opportunity. Threat force sympathizers will pick their own time and place to strike. Whenever possible, they will avoid targets that are well protected. Isolated radar sites or remote communications facilities are probable targets. Sympathizers will likely

arm themselves with personal or stolen military weapons, and their equipment will be limited to what they can buy, steal, or manufacture themselves. They are capable of arson, sabotage, or theft of military supplies and equipment.

(c) Partisans. Partisan groups operate in isolated areas in small numbers. They avoid open terrain and areas occupied by enemy troops but keep constant surveillance over enemy activities. Initially, these groups will be led by agents or special operations forces. Besides equipment that partisans can buy, steal, or manufacture themselves, the threat will provide them weapons and supplies. Partisans will conduct random sabotage, disrupt lines of communications, and delay military preparations.

(d) Activities Conducted by Terrorist Organizations: Individuals or groups who seek the overthrow of their government or economic system, or target US personnel or resources in retaliation against US foreign policy, may try to conduct their terrorism during the buildup for war and during actual hostilities. Recent terrorist incidents have shown these types of operations to be well executed. They are usually carried out by specially trained and organized underground elements. Terrorists maintain surveillance of their targets to exploit vulnerabilities. Their actions may be directed at civilian populations, host nation military forces, US

dependents and military forces, and commercial or military facilities. Terrorist operations are characterized by violence, speed, and surprise. When conducting their operations, terrorists usually employ handguns, rifles, light automatic weapons, hand grenades, antitank rocket propelled grenade launchers, and improvised explosive devices. Advanced weaponry and communications devices are also within the capabilities of terrorist groups. Supporters can provide terrorists with military weapons stolen from US forces, and threat forces can provide weapons from threat nations.

(2) Level II Activities. These activities include long-range reconnaissance and sabotage operations conducted by special operations forces (SOF). Most major threat forces throughout the world maintain special operations forces that are organized and highly trained to conduct independent economy of force operations in the enemy's rear areas.

(a) Missions for these forces could include disruption of command and control facilities, sabotage, destruction of supplies, time limited interdiction of lines of communications, and preparation of terrain or facilities for larger force incursions. Nuclear weapons-related facilities are expected to be their primary targets. These forces could also be employed to reconnoiter possible landing sites for large forces, discover opponent's positions, assess defensive readiness

in the rear area, and destroy key positions, such as radar locations, communications facilities, road junctions, and extended supply lines for petroleum, water, or electrical supplies.

(b) These forces can be airdropped, airlanded, or infiltrated by land or sea even before the commencement of hostilities. They are armed with automatic weapons, small antitank weapons, and portable surface-to-air missiles. They also possess a full range of explosive and incendiary devices. These forces may also be dropped in company, or larger size units to destroy alert and non-alert aircraft and support equipment vital to air operations. As such, they may constitute a major direct landing threat against key rear area targets such as air bases.

(3) Level III Activities. These activities include airborne, airmobile and airlanded, and amphibious operations.

(a) Conventional Airborne Forces. Besides their special operations forces, most threat nations have in their order of battle airborne units that can be used against the enemy's rear area. Depending upon the adversary, airborne units of up to division size could be dropped up to 320 kilometers (km) beyond the front line. Missions for these forces may include neutralizing special weapons delivery and storage facilities and command and control headquarters and seizing bridgeheads, river

crossing sites, airfields, road junctions, and key terrain on main avenues of approach into the enemy's rear area. A potential mission for larger airborne forces may include establishing a second battle front deep in the rear of the theater. Airborne forces are equipped with armored combat vehicles, mortars, artillery, rocket launchers, portable surface-to-air missiles, and anti-aircraft guns.

(b) Airmobile and Airlanded Forces.

Threat forces generally do not possess dedicated airmobile troops. Instead, enemy commanders believe that light infantry or motorized rifle units can perform airmobile and airlanded operations because, once on the ground, airmobile and airlanded operations are similar to operations conducted by light infantry and motorized rifle units. This allows the threat commander greater flexibility in choosing units for airmobile or airlanded operations.

(c) Naval Infantry Forces. Several major threat forces in various parts of the world use naval infantry (marine) units assigned to their naval fleets to conduct tactical amphibious landings to seize islands that support the enemy's ability to wage war, or to destroy naval bases, ports, airfields, and other vital objectives along enemy coast lines. Generally, these units are organized and trained like their ground force counterparts; however, they may be specially equipped with medium and light tanks, amphibious armored personnel carriers, and reconnaissance vehicles to conduct operations in a coastal

environment.

(4) Other Threats to US Air Force Air Bases. Other threats to US Air Force air bases include armor or motorized rifle units that may penetrate the forward edge of the battle area (FEBA) and the main defense area; nuclear, biological, and chemical operations; and electronic warfare (EW) operations.

(a) Breakthrough Forces. In a major battle involving a numerically superior threat, there is the possibility that the attacking enemy force may push back elements of the defending force into its own rear area. Before the defending force can regain the initiative, tank, motorized rifle, and light infantry units, supplemented by airborne and airmobile units, may attack any installation, troop formation, command control headquarters, communications facility, or air base they encounter. Although this type of breakthrough or penetration will cause a shift in US air and ground forces for a counterattack or defensive repositioning, US and host nation units occupying and operating in the rear area will have to fight the enemy forces until combat forces can be repositioned to meet the threat.

(b) Nuclear, Biological, and Chemical Operations. Some of our adversaries, specifically the Soviet Union, possess the capability of employing NBC weapons if the political and military situation dictates. The Soviet Army is the best trained and equipped force in

the world in the NBC environment. If hostilities escalate into a chemical environment, the Soviets may use chemicals to contaminate air bases, logistical complexes, and the surrounding main supply routes, avenues of approach through the rear area, and against reserve formations. Biological attacks may be made against the same targets. Nuclear strikes will be used to create large holes in the defenses, allowing speedy breakthroughs into the theater army area or to neutralize aerial ports of embarkation(APOE), as well as other air bases. Currently, the North Korean Ministry of the People's Armed Forces is placing more and more emphasis on NBC warfare. However, at this time all known NBC operations are defensive in nature. The NBC capabilities of other adversaries are not known at this time or are extremely limited in scope.

(c) Electronic Warfare (EW).

Threat electronic warfare capability is substantial. It includes radio interception, direction finding, jamming, and deception means. Threat electronic warfare operations attempt to locate, disrupt, or destroy opposing communications while protecting their own signal systems.

(5) The preceding threat description was an unclassified synopsis of information available through intelligence sources. As such, it is incomplete. For planning air base ground defense operations, obtain the most current and accurate threat information according to chapter 5.

APPENDIX E

APPENDIX E

WEAPONS AND MUNITIONS FOR ABGD

SOURCE: AFR 206-2, Volume I, 22 September 1983, Attachment 4.

Attachment 4 to AFR 206-2, Volume I, is provided in the remainder of this appendix. The weapons identified for use in US Air Force ABGD operations include:

1. M-16 Rifle.
2. 40mm Grenade Launcher, M203.
3. M60 Machinegun.
4. 40mm Grenade Machinegun, Mk 19.
5. M2 Browning Machinegun, Caliber .50 HB.
6. M72 Light Antitank Weapon (LAW).
7. 70mm Viper Antitank Weapon.
8. M67, 90mm Recoilless Rifle (RCLR).
9. 81mm Mortar.
10. M18A1 Mine (Claymore).

The remainder of this appendix provides descriptions of the weapons listed above.

WEAPONS AND MUNITIONS FOR ABGD

1. **General Information.** This attachment gives a brief overview of the weapons and munitions available for ABGD forces. For maximum effectiveness and to successfully complete the assigned mission, the ABGD planner should review the capabilities of organic and nonorganic armament and ensure that forces are equipped with the correct type and number of weapons.

2. **M16 Rifle.** The M16 rifle is a 5.56mm caliber, magazine fed, gas operated, shoulder fired weapon (see figure A4-1). It is designed for either semiautomatic or automatic fire through the use of a selector lever. Because of its ease of handling, durability, and accuracy, the M16 is used by the US Air Force throughout the world. It provides the basis of firepower for each tactical unit. When fired on automatic, the weapon delivers firepower comparable to a light machinegun. The straight line design from stock to muzzle reduces the effect of recoil and the tendency of the rifle to "climb." The weapon has the following characteristics:

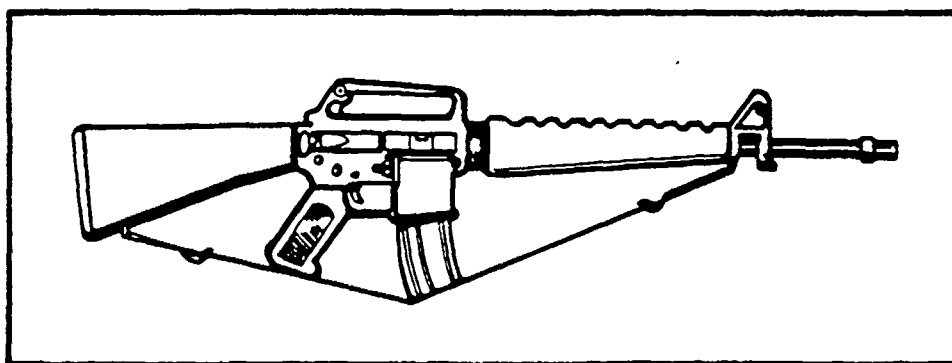
- a. Weight:
 - (1) Loaded with 20 round magazine: 7.6 pounds.
 - (2) Loaded with 30 round magazine: 7.9 pounds.
- b. Length: Without bayonet—39 inches.
- c. Range at which a 50-50 chance of target hit can be expected:
 - (1) Running target: Less than 200 meters.
 - (2) Stationary target: 250 meters.
- d. Maximum range of grazing fire: 350 meters.
- e. Maximum range: 2,650 meters.
- f. Cyclic rate of fire: 700 to 850 rounds per minute.
- g. Sustained rate of fire (semi-automatic): 12 to 15 rounds per minute.

3. **40mm Grenade Launcher, M203.** The M203 grenade launcher is a single shot, breech-loaded, pump-action weapon that attaches to the M16 rifle (see figure

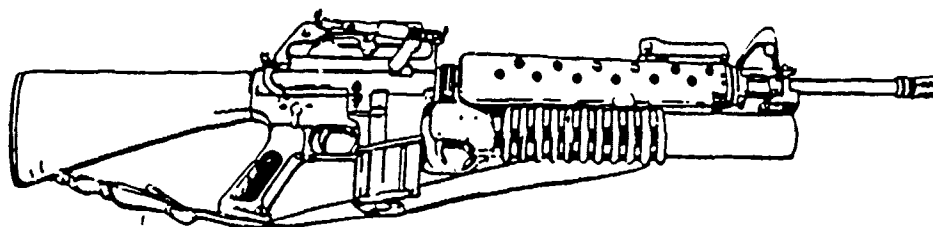
A4-2). The grenade launcher provides the ABGD force a means of suppressing and neutralizing targets that are located in dead spaces of grazing fire weapons. The M203 can be used to penetrate concrete, timber, or sandbagged weapons positions. The M203 can be used effectively against infantry accompanying armored vehicles, by dispersing the infantry and forcing the vehicles to "button up", thereby making them more vulnerable to antitank weapons. The weapon has the following characteristics:

- a. Weight: (M16 and M203, loaded) 11 pounds.
- b. Length: 29 inches.
- c. Range at which a gunner has a 50-50 chance of hitting the target:
 - (1) Point target: 200 meters.
 - (2) Area target (fire team size): 350 meters.
 - (3) Maximum range: 400 meters.
- d. Minimum armung range: 14 to 28 meters.
- e. Types of ammunition:
 - (1) High Explosive Dual Purpose: Penetrates 2 inches of armor and provides a 5-meter casualty-producing radius against exposed troops.
 - (2) Chemical Smoke (CS): Used to drive enemy from bunkers or enclosed positions.
 - (3) Star Parachute: Used as a signal and battlefield illuminant; available in white, red, or green colors and can illuminate a 200-meter diameter area for a period of 40 seconds.
 - (4) Star Clusters: Used for signaling; available in red, green, or white colors.
 - (5) Ground Smoke: Used to spot locations; however, it is not effective as a smoke screen.

4. **M60 Machinegun.** The 7.62mm M60 machinegun is an air-cooled, belt-fed, gas-operated, automatic weapon (see figure A4-3). It is issued with an attached bipod mount and a separate M122 tripod mount. The M60 is a maneuverable weapon that provides concentrated defen-



M16A1 Rifle.



40mm Grenade Launcher, M203.

sive fire and supports and supplements rifle fire in counterattacks. Its high volume of fire can suppress enemy elements until a maneuver force can get into position to destroy the enemy. The weapon has the following characteristics:

- a. Weight: 23 pounds.
- b. Length: 43.5 inches.
- c. Maximum range of grazing fire: 600 meters.
- d. Maximum range: 3,725 meters.
- e. Range at which a gunner has a 50-50 chance of hitting the target:
 - (1) Bipod mounted against moving target: 200 meters.
 - (2) Bipod or tripod mounted against stationary point target: 600 meters.
 - (3) Bipod mounted against area target (area is the size a fire team would occupy): 800 meters.
 - (4) Tripod mounted against area target: 1,000 meters.
- f. Rates of fire.
 - (1) Sustained: 100 rounds per minute (change barrel every 10 minutes).
 - (2) Rapid: 200 rounds per minute (change barrel every 2 minutes).

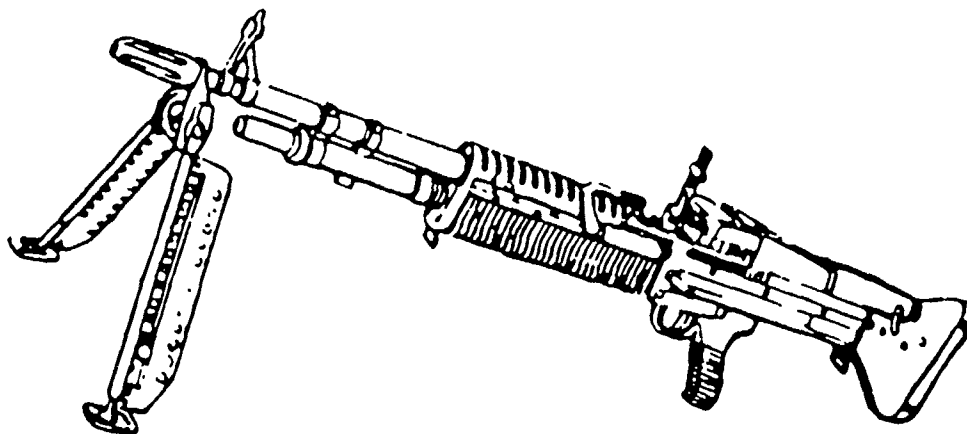
(3) Cyclic: In excess of 550 rounds per minute (change barrel every minute).

g. Types of ammunition:

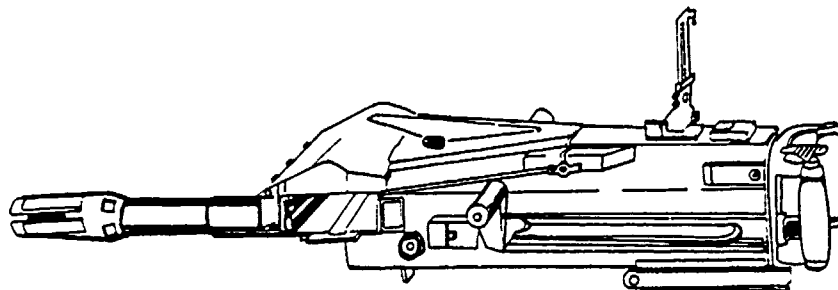
- (1) Ball.
- (2) Tracer.
- (3) Armor Piercing.

5. 40mm Grenade Machinegun, Mk 19. The Mk 19 is a belt-fed, blow back type, air cooled, point and area suppression weapon system (see figure A4-4). Usually, it is fired from a mount on a vehicle, but can be fired from the M122 tripod mount. The Mk 19 is an excellent, yet very simple weapon for the ABGD mission. It fires a relatively flat trajectory up to 1,000 meters and is effective for point suppression of lightly armored enemy vehicles, prepared positions, helicopters, and troops. From 1,000 to 2,400 meters, the weapon fires a high trajectory that is suitable for area suppression missions. Its high volume of fire can suppress both vehicles and personnel at great distances without revealing its position. (The Mk 19 cannot be detected by ear beyond 300 meters.) The weapon has the following characteristics:

- a. Weight: 53 pounds.
- b. Length: 32.5 inches.



M60 Machinegun.



40mm Grenade Machinegun, Mk-19.

c. Ranges at which a gunner has a 50-50 chance of hitting the target with a five round burst:

- (1) Moving point target: 800 meters.
- (2) Stationary point target: 1,000 meters.
- (3) Area target (fire team size): 2,400 meters

d. Maximum range: 2,400 meters.

e. Rate of fire: Rate is trigger controlled. With trigger held down, the rate of fire is 450 rounds per minute.

f. Types of ammunition (40mm Mk 19 round is not interchangeable with 40mm M203 round):

- (1) High Explosive: Used against personnel targets only.
- (2) High Explosive Dual Purpose: Used against all threats.

6. M2 Browning Machinegun, Caliber .50 HB. The 50 caliber machinegun is an automatic, recoil-operated, alternate feed, link-belt fed, air-cooled, crew-operated weapon. It is capable of single shot as well as automatic fire. This weapon can be fired against ground targets from either the standard M3 tripod mount (see figure A4-5), the M36 truck mount, or from the commander's cupola of an M113 armored personnel carrier (APC), and against aerial targets from either the M36 mount or the commander's cupola of the M113 APC. The 50 caliber machinegun is an excellent fire suppression weapon

against enemy troops and lightly armored vehicles. This weapon can also provide ABGD units a self-defense capability against hostile low-flying, low-performance aircraft. It has the following characteristics:

a. Weight:

- (1) Receiver Group: 60 pounds.
- (2) Barrel: 24 pounds.
- (3) Tripod Mount M3: 44 pounds.

b. Length with barrel: 65 inches.

c. Ranges at which a gunner has a 50-50 chance of hitting the target:

- (1) Tripod mount firing burst of 9 to 15 rounds:

- (a) Point target (troops): 700 meters.
- (b) Point target (armored vehicle): 1,000 meters.
- (c) Area target: 1,600 meters.

(2) Cupola mounted stationary vehicle firing burst of 9 to 15 rounds:

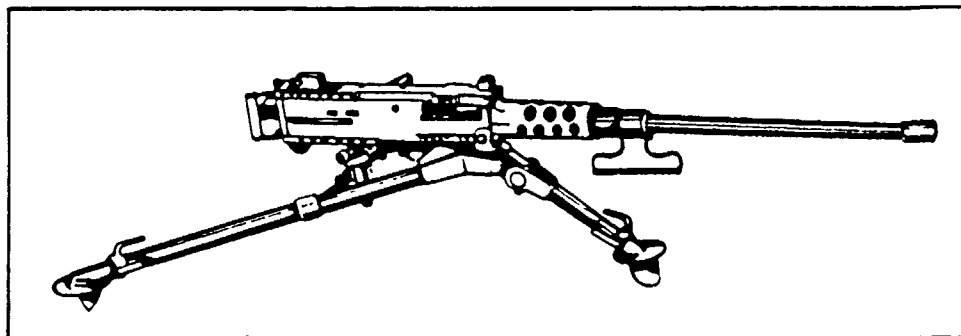
- (a) Point target (troops): 500 meters.
- (b) Point target (armored vehicle): 800 meters.
- (c) Area target: 1,000 meters.

(3) Cupola mounted moving vehicle firing burst of 15 to 30 rounds:

- (a) Area target (fire team size): 300 meters.
- (b) Area target (squad size): 500 meters.

d. Maximum range: 6,800 meters.

e. Rates of fire:



.50 Caliber Machinegun.

- (1) Sustained: 40 or less rounds per minute.
- (2) Rapid: 40 or more rounds per minute.
- (3) Cyclic: 450 to 550 rounds per minute.

f. Types of ammunition:

- (1) Ball. Used in training, against personnel and light material targets.
- (2) Tracer. Used to aid in observing fire. Secondary purposes are for incendiary effects and for signalling.
- (3) Armor Piercing. For use against armored aircraft and lightly armored vehicles, and concrete shelters.
- (4) Armor Piercing Incendiary. For combined armor piercing and incendiary effect.
- (5) Blank. For simulated fire (contains no bullets).
- (6) Dummy. For training (completely inert).

NOTE: This weapon will be phased out of the security police weapons inventory when the Mk19 is issued to all security police ABGD mounted flights.

7. M72 Light Antitank Weapon (LAW). The LAW is a self-contained unit consisting of a 66mm HEAT rocket, packed in a disposable fiberglass and aluminum launch tube (see figure A4-6). Its light weight and ability to penetrate in excess of 8 inches of armor make it an effective weapon for fire team members to carry for use against enemy armor, bunkers, or other hardened targets. The LAW has the following characteristics:

- a. Weight: 5.2 pounds.
- b. Length:
 - (1) Closed: 26 inches.
 - (2) Extended: 35 inches.
- c. Velocity: 475 feet per second at 70 degree F.
- d. Range at which a gunner has a 50-50 chance of hitting a target:
 - (1) Stationary target: 200 meters.
 - (2) Moving target: 150 meters.
- e. Maximum range: 1,000 meters.
- f. Minimum arming range: 10 meters.
- g. Armor penetration: 8 inches.

NOTE: Beginning in 1984, the US Air Force will buy the Viper light antitank weapon as a replacement for the LAW.

8. Viper. The Viper is a 70mm lightweight, shoulder-fired, portable, fire and forget, unguided antitank weapon. It consists of a rocket and a fiberglass launcher (see figure A4-7). The launcher includes the sights and firing mechanism and also serves as the system's carrying, handling, and storage container. The launcher is discarded after firing. The Viper has the following characteristics:

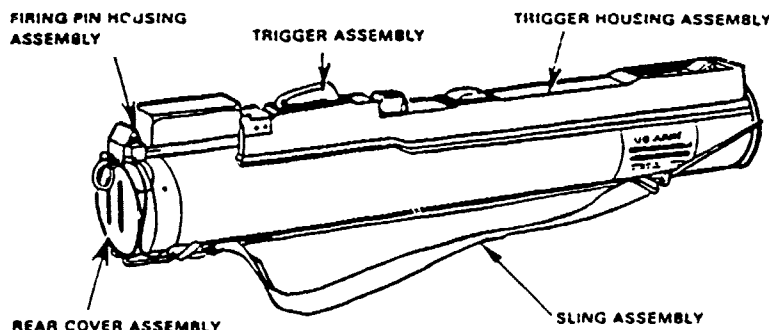
- a. Weight: 8.9 pounds.
- b. Length:
 - (1) Closed: 27 inches.
 - (2) Extended: 44 inches.
- c. Maximum effective range: 500 meters.

9. M67, 90mm Recoilless Rifle (RCLR). The M67 90mm RCLR is a breech-loaded, single-shot, lightweight, portable, crew-operated weapon. It can be used in both antitank and antipersonnel roles. It can be fired from the ground, using the bipod and monopod (see figure A4-8), or from the shoulder. The 90mm RCLR has these characteristics:

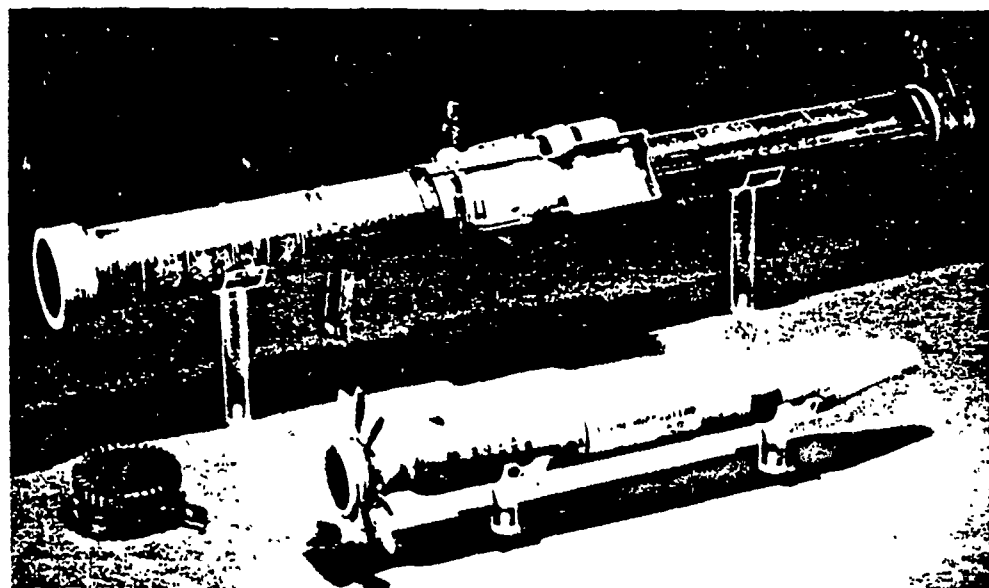
- a. Weight: 35.5 pounds.
- b. Length: 53 inches.
- c. Maximum range: 2,100 meters.
- d. Ranges at which a gunner has a 50-50 chance of hitting the target:
 - (1) Stationary target: 300 meters.
 - (2) Moving target: 200 meters.
- e. Types of ammunition:
 - (1) Heat.
 - (2) Target Practice.
 - (3) Canister (antipersonnel).

NOTE: This weapon will be phased out of the security police weapons inventory when the Mk19 is issued to all security police ABGD mounted flights.

10. 81mm Mortar. The 81mm mortar is a smooth bore, muzzle loading, high trajectory weapon capable of a high degree of accuracy. It can deliver fire at ranges up to 4,600 meters. The mortar consists of three main components, the barrel, the mount, and the baseplate (see figure A4-9). Careful consideration is required when locating



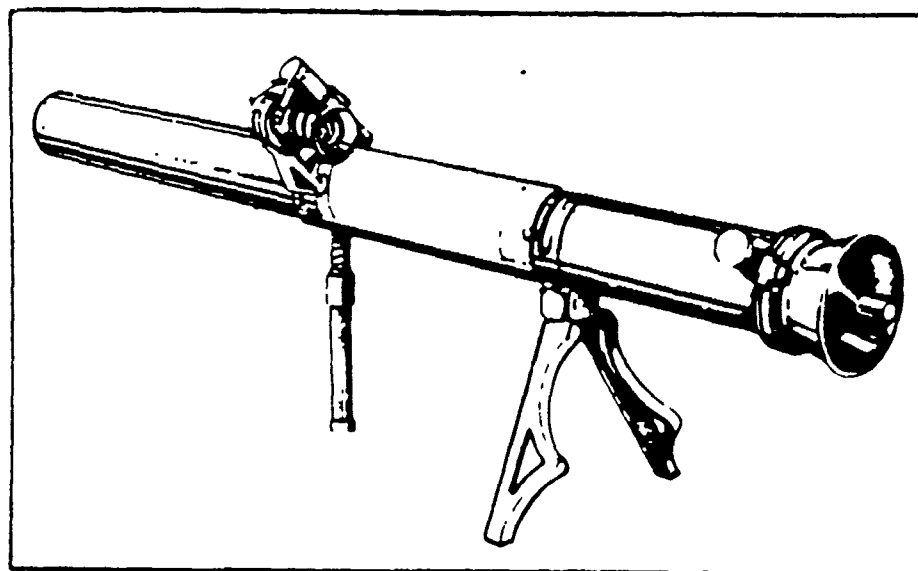
M72 Light Antitank Weapon (LAW).



70mm Viper.

81mm mortar pits on base. Placing the mortars in the middle of the base may allow for coverage of all approaches to the base, but short rounds or the shrapnel from illumination rounds may strike areas on base. Plac-

ing mortars near the base perimeter increases the weapons' offbase range and protects against short rounds, but makes the weapon more vulnerable to enemy direct attack. The 81mm mortar has the following characteristics:



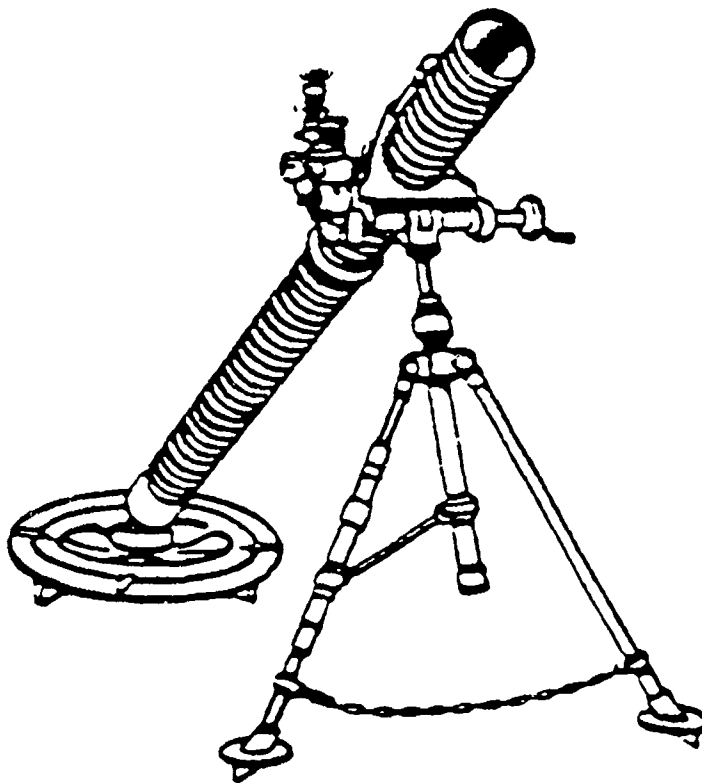
90mm Recoilless Rifle.

- a. Weight:
 - (1) Barrel: 28 pounds.
 - (2) Mount: 31 pounds.
 - (3) Base plate: 28.5 pounds.
- b. Length: 51 inches.
- c. Range:
 - (1) High Explosive (HE). Maximum range is 4,500 meters.
 - (2) White Phosphorous (WP): Maximum range is 4,500 meters.
 - (3) Illumination (ILLUM): Maximum range is 2,100 meters.
- d. Ammunition:
 - (1) High Explosive: Several high explosive rounds are available for the 81mm mortar. These rounds can be fitted with different fuses that vary the burst of the round from immediately on impact to a set delay. Bursting area is 25 by 30 meters.
 - (2) White Phosphorous: This round is used for screening, incendiary action, and signaling. This round has a burst area 20 meters in diameter.

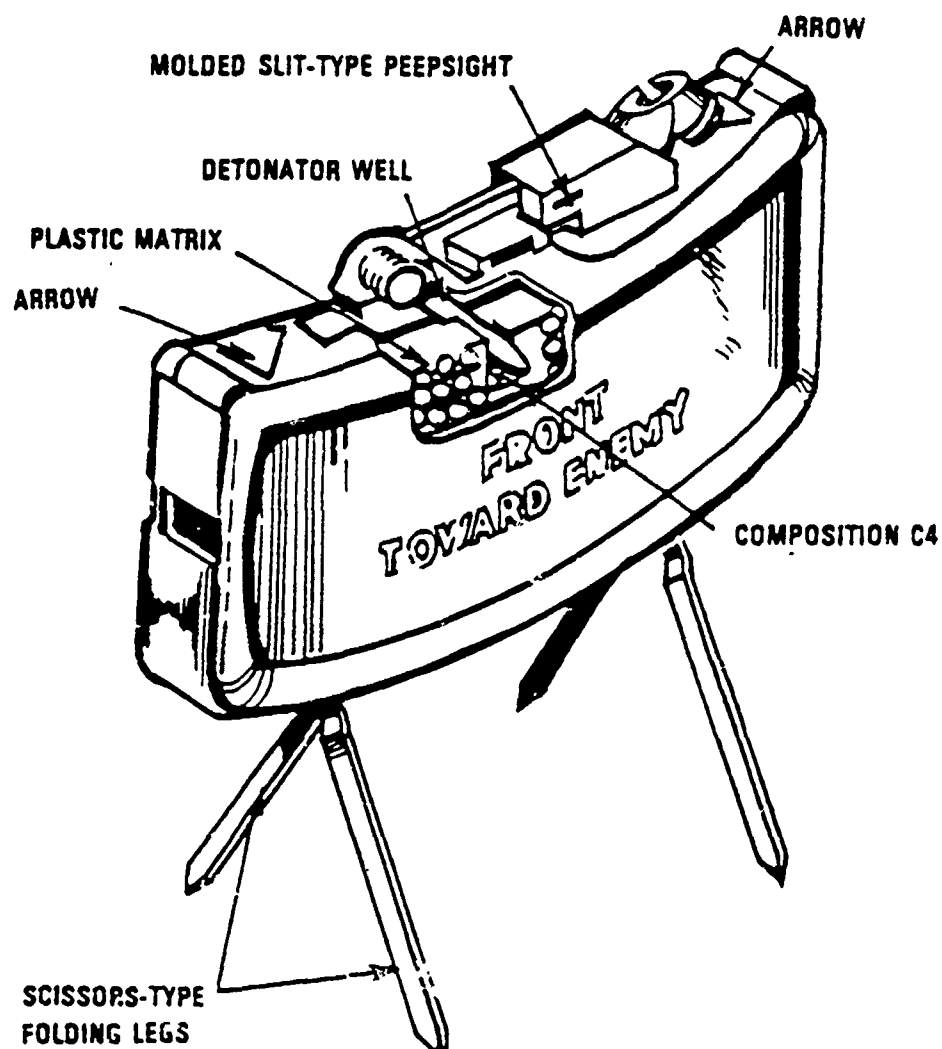
(3) Illumination: The illumination round consists of an illuminant and a parachute assembly. The round separates at about 400 meters and the illuminant burns for about 75 seconds, producing 500,000 candlepower. The round illuminates an area about 1,150 meters in diameter.

11. M18A1 Mine (Claymore). The Claymore mine is a directional, fixed-fragmentation mine consisting of a layer of steel balls attached in front of an explosive (see figure A4-10). It provides a fragmentation blast to 100 meters in a 60 degree arc in front of the mine and can be command detonated or booby-trapped. The mine can be used as a defensive weapon to protect approaches to a base or used offensively in ambushes of enemy movements. The mine has the following characteristics:

- a. Weight: 3.5 pounds.
- b. Explosive: 1.5 pound C4.
- c. Projectiles: 700 steel balls.
- d. Radius: 100 meters in 60 degree arc.



81mm Mortar.



M18A1 Claymore Mine.

APPENDIX F

APPENDIX F

ABGD COMMUNICATIONS SYSTEM REQUIREMENTS

SOURCE: AFR 206-2, Volume I, 22 September 1983, page 38.

Paragraph 4-1 b of the source document identifies the following requirements for an effective ABGD communications system:

1. Secure voice communications.
2. Immediate access to the BDOC communications net by the elements of the screening force (where applicable), the main defense force, the mobile reserve, and the close defense force.
3. Continuous access by the BDOC to the wing and base CP and the US Army or host nation rear area operations center (RAOC).
4. Reduced message preparation time by using precoded messages. The use of precoded messages throughout the communications network ensures economical use of the most precious commodity on the battlefield--time.
5. The capability for rapid analysis and assessment by successively higher levels of command on the significance of the threat.

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INITIAL DISTRIBUTION LIST

1. Colonel Lawrence R. Brehm
US Air Force Section
US Army Command and General Staff College
Fort Leavenworth, Kansas 66027
2. Lieutenant Colonel David K. Burke
US Air Force Section
US Army Command and General Staff College
Fort Leavenworth, Kansas 66027
3. Colonel William D. Doran
Chief, Base Defense Division
Directorate of Operations
Headquarters Air Force Office of Security Police
Kirtland Air Force Base, New Mexico 87117
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